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<211> 353
<212> PRT
<213> Homo sapiens
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35 40 45

Leu Ser Lys Tyr Glu Ser Ser Glu Ile Arg Leu Leu Glu Ile Leu Glu
65 70 75 80

Gln Glu Glu His Leu Glu Ala Trp Trp Leu Gln Leu Lys Ser Glu Tyr
100 105 110

Pro Asp Leu Phe Glu Trp Phe Cys Val Lys Thr Leu Lys Val Cys Cys
115 120 125

Ser Pro Gly Thr Tyr Gly Pro Asp Cys Leu Ala Cys Gln Gly Gly Ser
130 135 140

Gln Arg Pro Cys Ser Gly Asn Gly His Cys Ser Gly Asp Gly Ser Arg
145 150 155 160

Gln Gly Asp Gly Ser Cys Arg Cys His Met Gly Tyr Gln Gly Pro Leu
165 170 175

Cys Thr Asp Cys Met Asp Gly Tyr Phe Ser Ser Leu Arg Asn Glu Thr
180 185 190

His Ser Ile Cys Thr Ala Cys Asp Glu Ser Cys Lys Thr Cys Ser Gly
195 200 205

Leu Thr Asn Arg Asp Cys Gly Glu Cys Glu Val Gly Trp Val Leu Asp
210 215 220

Glu Gly Ala Cys Val Asp Val Asp Glu Cys Ala Ala Glu Pro Pro Pro
225 230 235 240

Cys Ser Ala Ala Gln Phe Cys Lys Asn Ala Asn Gly Ser Tyr Thr Cys
245 250 255

Glu Glu Cys Asp Ser Ser Cys Val Gly Cys Thr Gly Glu Gly Pro Gly
260 265 270

Asn Cys Lys Glu Cys Ile Ser Gly Tyr Ala Arg Glu His Gly Gln Cys
275 280 285

Ala Asp Val Asp Glu Cys Ser Leu Ala Glu Lys Thr Cys Val Arg Lys
290 295 300

Asn Glu Asn Cys Tyr Asn Thr Pro Gly Ser Tyr Val Cys Val Cys Pro
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Asp Gly Phe Glu Glu Thr Glu Asp Ala Cys Val Pro Pro Ala Glu Ala
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Glu Ala Thr Glu Gly Glu Ser Pro Thr Gln Leu Pro Ser Arg Glu Asp
340 345 350

Leu

<210> 3

<211> 2206

<212> DNA

<213> Homo sapiens

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aacagccctg gctgagggag ctgcagcgca gcagagtatc tgacggcgcc aggttgcgta 180
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<210> 4
<211> 379
<212> PRT
<213> Homo sapiens

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Glu Glu Ser Leu Tyr Leu Trp Ile Asp Ala His Gln Ala Arg Val Leu
      35             40             45

Ile Gly Phe Glu Glu Asp Ile Leu Ile Val Ser Glu Gly Lys Met Ala
      50             55             60

Pro Phe Thr His Asp Phe Arg Lys Ala Gln Gln Arg Met Pro Ala Ile

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65					70					75				80
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Ala	Glu	Tyr	Phe	Tyr	Glu	Phe	Leu	Ser	Leu	Arg	Ser	Leu	Asp	Lys Gly
			100					105					110	
Ile	Met	Ala	Asp	Pro	Thr	Val	Asn	Val	Pro	Leu	Leu	Gly	Thr	Val Pro
		115					120					125		
His	Lys	Ala	Ser	Val	Val	Gln	Val	Gly	Phe	Pro	Cys	Leu	Gly	Lys Gln
	130					135					140			
Asp	Gly	Val	Ala	Ala	Phe	Glu	Val	Asp	Val	Ile	Val	Met	Asn	Ser Glu
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Gly	Asn	Thr	Ile	Leu	Gln	Thr	Pro	Gln	Asn	Ala	Ile	Phe	Phe	Lys Thr
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Cys	Gln	Gln	Ala	Glu	Cys	Pro	Gly	Gly	Cys	Arg	Asn	Gly	Gly	Phe Cys
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Asn	Glu	Arg	Arg	Ile	Cys	Glu	Cys	Pro	Asp	Gly	Phe	His	Gly	Pro His
		195					200					205		
Cys	Glu	Lys	Ala	Leu	Cys	Thr	Pro	Arg	Cys	Met	Asn	Gly	Gly	Leu Cys
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Cys	Asp	Lys	Ala	Asn	Cys	Ser	Thr	Thr	Cys	Phe	Asn	Gly	Gly	Thr Cys
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Phe	Tyr	Pro	Gly	Lys	Cys	Ile	Cys	Pro	Pro	Gly	Leu	Glu	Gly	Glu Gln
			260					265					270	
Cys	Glu	Ile	Ser	Lys	Cys	Pro	Gln	Pro	Cys	Arg	Asn	Gly	Gly	Lys Cys
	275						280					285		
Ile	Gly	Lys	Ser	Lys	Cys	Lys	Cys	Ser	Lys	Gly	Tyr	Gln	Gly	Asp Leu
	290					295					300			
Cys	Ser	Lys	Pro	Val	Cys	Glu	Pro	Gly	Cys	Gly	Ala	His	Gly	Thr Cys
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His	Glu	Pro	Asn	Lys	Cys	Gln	Cys	Gln	Glu	Gly	Trp	His	Gly	Arg His
				325					330					335
Cys	Asn	Lys	Arg	Tyr	Glu	Ala	Ser	Leu	Ile	His	Ala	Leu	Arg	Pro Ala
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Arg Arg Asp Pro Pro Glu Ser Asn Tyr Ile Trp
370 375

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<210> 5
<211> 45
<212> DNA
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 5
aggggagcacg gacagtgtgc agatgtggac gagtgtcac tagca 45

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<210> 6
<211> 21
<212> DNA
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 6
agaagtgtatc tctggctacg c 21

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<210> 7
<211> 22
<212> DNA
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

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<400> 7
taagtcctggc acattacagg tc                22
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<210> 8
<211> 49
<212> DNA
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 8'

ccacgatgt atgaatggtg gacttttgtt gactcctggt ttctgcac 49

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<210> 9
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 9
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<210> 10
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 10
 tgctgatttc aactgctct ccc 23

<210> 11
 <211> 2197
 <212> DNA
 <213> Homo sapiens

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<210> 12

<211> 164

<212> PRT

<213> Homo sapiens

<400> 12

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Pro Gly Leu His Leu Arg Gly Ile Arg Asp Ala Gly Gly Arg Tyr Cys
 35 40 45

Gln Glu Gln Asp Leu Cys Cys Arg Gly Arg Ala Asp Asp Cys Ala Leu
 50 55 60

Pro Tyr Leu Gly Ala Ile Cys Tyr Cys Asp Leu Phe Cys Asn Arg Thr
 65 70 75 80

Val Ser Asp Cys Cys Pro Asp Phe Trp Asp Phe Cys Leu Gly Val Pro
 85 90 95

Pro Pro Phe Pro Pro Ile Gln Gly Cys Met His Gly Gly Arg Ile Tyr
 100 105 110

Pro Val Leu Gly Thr Tyr Trp Asp Asn Cys Asn Arg Cys Thr Cys Gln
 115 120 125

Glu Asn Arg Gln Trp His Gly Gly Ser Arg His Asp Gln Ser His Gln
 130 135 140

Pro Gly Gln Leu Trp Leu Ala Gly Trp Glu Pro Gln Arg Leu Leu Gly
 145 150 155 160

His Asp Pro Gly

<210> 13
 <211> 533
 <212> DNA
 <213> Homo sapiens

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 <222> (80)
 <223> a, t, c or g

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 <222> (94)
 <223> a, t, c or g

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 <222> (144)
 <223> a, t, c or g

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 <222> (188)
 <223> a, t, c or g

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<210> 14
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 14

ttcgaggcct ctgagaagtg gccc

24

<210> 15

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 15

ggcggatatct ctctggcctc cc

22

<210> 16

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 16

ttctccacag cagctgtggc atccgatcgt gtctcaatcc attctctggg

50

<210> 17

<211> 960

<212> DNA

<213> Homo sapiens

<400> 17

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<210> 18

<211> 189

<212> PRT

<213> Homo sapiens

<400> 18

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Pro Pro Ser Leu Arg Cys Ser Leu His Ser Ala Cys Cys Ser Gly Asp
 35 40 45

Pro Ala Ser Tyr Arg Leu Trp Gly Ala Pro Leu Gln Pro Thr Leu Gly
 50 55 60

Val Val Pro Gln Ala Ser Val Pro Leu Leu Thr Asp Leu Ala Gln Trp
 65 70 75 80

Glu Pro Val Leu Val Pro Glu Ala His Pro Asn Ala Ser Leu Thr Met
 85 90 95

Tyr Val Cys Thr Pro Val Pro His Pro Asp Pro Pro Met Ala Leu Ser
 100 105 110

Arg Thr Pro Thr Arg Gln Ile Ser Ser Ser Asp Thr Asp Pro Pro Ala
 115 120 125

Asp Gly Pro Ser Asn Pro Leu Cys Cys Cys Phe His Gly Pro Ala Phe
 130 135 140

Ser Thr Leu Asn Pro Val Leu Arg His Leu Phe Pro Gln Glu Ala Phe
 145 150 155 160

Pro Ala His Pro Ile Tyr Asp Leu Ser Gln Val Trp Ser Val Val Ser
 165 170 175

Pro Ala Pro Ser Arg Gly Gln Ala Leu Arg Arg Ala Gln
 180 185

<210> 19

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 19

tgctgtgcta ctctgcaaa gccc

24

<210> 20

<211> 24

<212> DNA

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<400> 20

24

<210> 21

<211> 44

<212> DNA

<213> Artificial Sequence

 $\langle 220 \rangle$

<400> 21

44

<210> 22

<211> 1200

<212> DNA

<213> Homo sapiens

<400> 22

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gaccgaccag	ctgagcaggc	ggcagatccg	cgagtaccaa	ctctacagca	ggaccagtgg	180
caagcacgtg	caggtcaccg	ggcgctcgcat	ctccgcccac	gccgaggacg	gcaacaagtt	240
tgccaagctc	atagtggaga	cggacacggt	tggcagccgg	gttcgcata	aaggggctga	300
gagtgagaag	tacatctgta	tgaacaagag	gggcaagctc	atcgggaagc	ccagcgggaa	360
gagcaaaagc	tgcgtgttca	cggagatcgt	gctggagaac	aactatacgg	ccttcacaaa	420
cgcccgccac	gagggctggt	tcatggcctt	cacggcgacg	gggcggcccc	gccaggcttc	480
ccgcagccgc	cagaaccagc	gcgaggccca	cttcataaag	cgccctacc	aaggccagct	540
gcccttcccc	aaccacgccg	agaagcagaa	gcagttcgag	tttgtgggct	ccgccccac	600
ccgcgggacc	aagcgcacac	ggcgccccca	gcccctcacg	tagtctggga	ggcagggggc	660
agcagccctt	gggcgcgctc	cccacccctt	tcccttctta	atccaaggac	tgggctgggg	720
tggcggggagg	ggagccagat	ccccgaggga	ggaccctgag	ggccgcgaag	catccgagcc	780
cccagctggg	aaggggcagg	ccggtgcccc	aggggcggct	ggcacagtgc	ccccttcccg	840
gacgggtggc	aggccctgga	gaggaactga	gtgtcaccct	gatctcaggc	caccagcctc	900
tgccggcctc	ccagccgggc	tctgaagcc	cgctgaaagg	tcagcgactg	aaggccttgc	960
agacaaccgt	ctggaggtgg	ctgtcctcaa	aatctgcttc	tccgattctc	ctcagctcgc	1020
ccccagccc	caaactctc	ctggctagac	tgtagggaagg	gacttttctt	tgtttgtttg	1080
tttcaggaaa	aaagaaaagg	agagagagga	aaatagaggg	ttgtccactc	ctcacattcc	1140
acqacccaag	cctgcacccc	accccccaact	cccaqccccq	qaataaaaacc	attttctctc	1200

<210> 23

<211> 205

<212> PRT

<213> Homo sapiens

<400> 23

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Leu Ile Leu Cys Cys Gln Thr Gln Tyr Val Arg Asp Gln Gly Ala Met
 20 25 30

Thr Asp Gln Leu Ser Arg Arg Gln Ile Arg Glu Tyr Gln Leu Tyr Ser
 35 40 45

Arg Thr Ser Gly Lys His Val Gln Val Thr Gly Arg Arg Ile Ser Ala
 50 55 60

Thr Ala Glu Asp Gly Asn Lys Phe Ala Lys Leu Ile Val Glu Thr Asp
 65 70 75 80

Thr Phe Gly Ser Arg Val Arg Ile Lys Gly Ala Glu Ser Glu Lys Tyr
 85 90 95

Ile Cys Met Asn Lys Arg Gly Lys Leu Ile Gly Lys Pro Ser Gly Lys
 100 105 110

Ser Lys Asp Cys Val Phe Thr Glu Ile Val Leu Glu Asn Asn Tyr Thr
 115 120 125

Ala Phe Gln Asn Ala Arg His Glu Gly Trp Phe Met Ala Phe Thr Arg
 130 135 140

Gln Gly Arg Pro Arg Gln Ala Ser Arg Ser Arg Gln Asn Gln Arg Glu
 145 150 155 160

Ala His Phe Ile Lys Arg Leu Tyr Gln Gly Gln Leu Pro Phe Pro Asn
 165 170 175

His Ala Glu Lys Gln Lys Gln Phe Glu Phe Val Gly Ser Ala Pro Thr
 180 185 190

Arg Arg Thr Lys Arg Thr Arg Arg Pro Gln Pro Leu Thr
 195 200 205

<210> 24

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 24

cagtacgtga gggaccaggg cgccatga

28

<210> 25

<211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 25
 ccggtgacct gcacgtgctt gccca 24

<210> 26
 <211> 41
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 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<220>
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<400> 26
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<210> 27
 <211> 2479
 <212> DNA
 <213> Homo sapiens

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 ttaccatacg ccctcaggac gttccctcta gctggagttc tggacttcaa cagaacccca 180
 tccagtcatt ttgattttgc tgtttatfff ttttttcttt ttctttttcc caccacattg 240
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 cttttttcct gaagtcttgg cttatcattt ccctgggggt ctactcacag gtgtccaaac 360
 tccctggcctg ccctagtgtg tgccgctgcg acaggaactt tgtctactgt aatgagcgaa 420
 gcttgacctc agtgccctct gggatcccgg agggcgtaac cgtactctac ctccacaaca 480
 accaaattaa taatgctgga tttcctgcag aactgcacaa tgtacagtcg gtgcacacgg 540
 tctacctgta tggcaaccaa ctggacgaat tccccatgaa ccttcccaag aatgtcagag 600
 ttctccattt gcaggaaaac aatattcaga ccatttcacg ggctgctctt gccagctct 660
 tgaagcttga agagctgcac ctggatgaca actccatata cacagtgggg gtggaagacg 720
 gggccttcgg ggaggctatt agcctcaaat tgttggtttt gtctaagaat cacctgagca 780
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 ctgtcatatc cgacatggcc ttccagaatc tcacgagctt ggagcgtctt attgtggacg 900
 ggaacctcct gaccaacaag ggtatcgccg agggcacctt cagccatctc accaagctca 960
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 atctgatcag gctctatttg caggacaacc agataaacca cattcctttg acagccttct 1080
 caaatctgcy taagctggaa cggctggata tatccaacaa ccaactgcgg atgctgactc 1140

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aagggggttt tgataatctc tccaacctga agcagctcac tgctcggaat aacccttggt 1200
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taaatatgaa tcttttgtcc tgtccacca cgacccccgg cctgcctctc ttcaccccag 1380
ccccaagtac agcttctccg accactcage ctcccacoot ctctattcca aaccctagca 1440
gaagctacac gcctccaact cctaccacat cgaaacttcc cactgattcct gactgggatg 1500
gcagagaaag agtgaccca cctatttctg aacggatcca gctctctatc ctttttgtga 1560
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cgtcccacag catgggtccc ccctttctgc tggcgggctt gatcgggggc gcggtgat 1920
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cctcccagaa gtggaaatac aaccggggcc ggcggaaaga tgattattgc gaggcaggca 2040
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gcattaatta cacagactgc catatcccca acaacatgcg atactgcaac agcagcgtgc 2220
cagacctgga gcaactgccat acgtgacagc cagaggccca gcgttatcaa ggcggacaat 2280
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<210> 28

<211> 660

<212> PRT

<213> Homo sapiens

<400> 28

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Lys Ser Trp Leu Ile Ile Ser Leu Gly Leu Tyr Ser Gln Val Ser Lys
20 25 30

Leu Leu Ala Cys Pro Ser Val Cys Arg Cys Asp Arg Asn Phe Val Tyr
35 40 45

Cys Asn Glu Arg Ser Leu Thr Ser Val Pro Leu Gly Ile Pro Glu Gly
50 55 60

Val Thr Val Leu Tyr Leu His Asn Asn Gln Ile Asn Asn Ala Gly Phe
65 70 75 80

Pro Ala Glu Leu His Asn Val Gln Ser Val His Thr Val Tyr Leu Tyr
85 90 95

Gly Asn Gln Leu Asp Glu Phe Pro Met Asn Leu Pro Lys Asn Val Arg
100 105 110

Val Leu His Leu Gln Glu Asn Asn Ile Gln Thr Ile Ser Arg Ala Ala
115 120 125

Leu 130	Ala	Gln	Leu	Leu	Lys	Leu	Glu	Glu	Leu	His	Leu	Asp	Asp	Asn	Ser
Ile 145	Ser	Thr	Val	Gly	Val	Glu	Asp	Gly	Ala	Phe	Arg	Glu	Ala	Ile	Ser 160
Leu	Lys	Leu	Leu	Phe	Leu	Ser	Lys	Asn	His	Leu	Ser	Ser	Val	Pro	Val
Gly	Leu	Pro	Val	Asp	Leu	Gln	Glu	Leu	Arg	Val	Asp	Glu	Asn	Arg	Ile
Ala	Val	Ile	Ser	Asp	Met	Ala	Phe	Gln	Asn	Leu	Thr	Ser	Leu	Glu	Arg
Leu	Ile	Val	Asp	Gly	Asn	Leu	Leu	Thr	Asn	Lys	Gly	Ile	Ala	Glu	Gly
Thr 225	Phe	Ser	His	Leu	Thr	Lys	Leu	Lys	Glu	Phe	Ser	Ile	Val	Arg	Asn 240
Ser	Leu	Ser	His	Pro	Pro	Pro	Asp	Leu	Pro	Gly	Thr	His	Leu	Ile	Arg
Leu	Tyr	Leu	Gln	Asp	Asn	Gln	Ile	Asn	His	Ile	Pro	Leu	Thr	Ala	Phe
Ser	Asn	Leu	Arg	Lys	Leu	Glu	Arg	Leu	Asp	Ile	Ser	Asn	Asn	Gln	Leu
Arg 290	Met	Leu	Thr	Gln	Gly	Val	Phe	Asp	Asn	Leu	Ser	Asn	Leu	Lys	Gln
Leu 305	Thr	Ala	Arg	Asn	Asn	Pro	Trp	Phe	Cys	Asp	Cys	Ser	Ile	Lys	Trp 320
Val	Thr	Glu	Trp	Leu	Lys	Tyr	Ile	Pro	Ser	Ser	Leu	Asn	Val	Arg	Gly
Phe	Met	Cys	Gln	Gly	Pro	Glu	Gln	Val	Arg	Gly	Met	Ala	Val	Arg	Glu
Leu	Asn	Met	Asn	Leu	Leu	Ser	Cys	Pro	Thr	Thr	Thr	Pro	Gly	Leu	Pro
Leu 370	Phe	Thr	Pro	Ala	Pro	Ser	Thr	Ala	Ser	Pro	Thr	Thr	Gln	Pro	Pro
Thr 385	Leu	Ser	Ile	Pro	Asn	Pro	Ser	Arg	Ser	Tyr	Thr	Pro	Pro	Thr	Pro 400
Thr	Thr	Ser	Lys	Leu	Pro	Thr	Ile	Pro	Asp	Trp	Asp	Gly	Arg	Glu	Arg

				405						410					415	
Val	Thr	Pro	Pro	Ile	Ser	Glu	Arg	Ile	Gln	Leu	Ser	Ile	His	Phe	Val	
			420					425					430			
Asn	Asp	Thr	Ser	Ile	Gln	Val	Ser	Trp	Leu	Ser	Leu	Phe	Thr	Val	Met	
		435					440					445				
Ala	Tyr	Lys	Leu	Thr	Trp	Val	Lys	Met	Gly	His	Ser	Leu	Val	Gly	Gly	
	450					455					460					
Ile	Val	Gln	Glu	Arg	Ile	Val	Ser	Gly	Glu	Lys	Gln	His	Leu	Ser	Leu	
465				470						475					480	
Val	Asn	Leu	Glu	Pro	Arg	Ser	Thr	Tyr	Arg	Ile	Cys	Leu	Val	Pro	Leu	
				485					490					495		
Asp	Ala	Phe	Asn	Tyr	Arg	Ala	Val	Glu	Asp	Thr	Ile	Cys	Ser	Glu	Ala	
			500					505					510			
Thr	Thr	His	Ala	Ser	Tyr	Leu	Asn	Asn	Gly	Ser	Asn	Thr	Ala	Ser	Ser	
		515					520					525				
His	Glu	Gln	Thr	Thr	Ser	His	Ser	Met	Gly	Ser	Pro	Phe	Leu	Leu	Ala	
	530					535					540					
Gly	Leu	Ile	Gly	Gly	Ala	Val	Ile	Phe	Val	Leu	Val	Val	Leu	Leu	Ser	
545					550					555					560	
Val	Phe	Cys	Trp	His	Met	His	Lys	Lys	Gly	Arg	Tyr	Thr	Ser	Gln	Lys	
				565					570					575		
Trp	Lys	Tyr	Asn	Arg	Gly	Arg	Arg	Lys	Asp	Asp	Tyr	Cys	Glu	Ala	Gly	
			580					585					590			
Thr	Lys	Lys	Asp	Asn	Ser	Ile	Leu	Glu	Met	Thr	Glu	Thr	Ser	Phe	Gln	
		595					600					605				
Ile	Val	Ser	Leu	Asn	Asn	Asp	Gln	Leu	Leu	Lys	Gly	Asp	Phe	Arg	Leu	
	610					615					620					
Gln	Pro	Ile	Tyr	Thr	Pro	Asn	Gly	Gly	Ile	Asn	Tyr	Thr	Asp	Cys	His	
625					630					635					640	
Ile	Pro	Asn	Asn	Met	Arg	Tyr	Cys	Asn	Ser	Ser	Val	Pro	Asp	Leu	Glu	
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His	Cys	His	Thr													
			660													

<210> 29
 <211> 21
 <212> DNA

<220>

<400> 29

21

<210> 30

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<400> 30

22

<210> 31

<211> 22

<212> DNA

<213> Artificial Sequence

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<400> 31

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<210> 32

<211> 46

<212> DNA

<213> Artificial Sequence

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<400> 32

46

<210> 33

<211> 3449

<212> DNA

<213> Homo sapiens

<400> 33

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cgctcccac gagcgatccc cgaggagagc cgcggccctc qgcgaggcga agaggccgac 120

[illegible]

ctgtagaaca ctggccatag gaaatgctgt tttttgtac tggactttac cttgatatat 3360
 gtatatggat gtatgcataa aatcatagga catatgtact tgtggaacaa gttggatttt 3420
 ttatacaata ttaaaattca ccacttcag 3449

<210> 34

<211> 915

<212> PRT

<213> Homo sapiens

<400> 34

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Val	Leu	Leu	Pro	Ala	Glu	Ala	Arg	Glu	Arg	Ser	Arg	Gly	Arg	Ser	Ile	
			20					25					30			
Ser	Arg	Gly	Arg	His	Ala	Arg	Thr	His	Pro	Gln	Thr	Ala	Leu	Leu	Glu	
		35					40					45				
Ser	Ser	Cys	Glu	Asn	Lys	Arg	Ala	Asp	Leu	Val	Phe	Ile	Ile	Asp	Ser	
	50					55					60					
Ser	Arg	Ser	Val	Asn	Thr	His	Asp	Tyr	Ala	Lys	Val	Lys	Glu	Phe	Ile	
65					70					75					80	
Val	Asp	Ile	Leu	Gln	Phe	Leu	Asp	Ile	Gly	Pro	Asp	Val	Thr	Arg	Val	
			85						90					95		
Gly	Leu	Leu	Gln	Tyr	Gly	Ser	Thr	Val	Lys	Asn	Glu	Phe	Ser	Leu	Lys	
			100					105					110			
Thr	Phe	Lys	Arg	Lys	Ser	Glu	Val	Glu	Arg	Ala	Val	Lys	Arg	Met	Arg	
		115					120					125				
His	Leu	Ser	Thr	Gly	Thr	Met	Thr	Gly	Leu	Ala	Ile	Gln	Tyr	Ala	Leu	
	130					135					140					
Asn	Ile	Ala	Phe	Ser	Glu	Ala	Glu	Gly	Ala	Arg	Pro	Leu	Arg	Glu	Asn	
145					150					155					160	
Val	Pro	Arg	Val	Ile	Met	Ile	Val	Thr	Asp	Gly	Arg	Pro	Gln	Asp	Ser	
				165					170					175		
Val	Ala	Glu	Val	Ala	Ala	Lys	Ala	Arg	Asp	Thr	Gly	Ile	Leu	Ile	Phe	
			180					185					190			
Ala	Ile	Gly	Val	Gly	Gln	Val	Asp	Phe	Asn	Thr	Leu	Lys	Ser	Ile	Gly	
		195					200					205				
Ser	Glu	Pro	His	Glu	Asp	His	Val	Phe	Leu	Val	Ala	Asn	Phe	Ser	Gln	
	210					215					220					
Ile	Glu	Thr	Leu	Thr	Ser	Val	Phe	Gln	Lys	Lys	Leu	Cys	Thr	Ala	His	

225					230				235				240				
Met	Cys	Ser	Thr	Leu	Glu	His	Asn	Cys	Ala	His	Phe	Cys	Ile	Asn	Ile		
				245					250					255			
Pro	Gly	Ser	Tyr	Val	Cys	Arg	Cys	Lys	Gln	Gly	Tyr	Ile	Leu	Asn	Ser		
				260					265					270			
Asp	Gln	Thr	Thr	Cys	Arg	Ile	Gln	Asp	Leu	Cys	Ala	Met	Glu	Asp	His		
				275					280					285			
Asn	Cys	Glu	Gln	Leu	Cys	Val	Asn	Val	Pro	Gly	Ser	Phe	Val	Cys	Gln		
				290					295					300			
Cys	Tyr	Ser	Gly	Tyr	Ala	Leu	Ala	Glu	Asp	Gly	Lys	Arg	Cys	Val	Ala		
305					310					315					320		
Val	Asp	Tyr	Cys	Ala	Ser	Glu	Asn	His	Gly	Cys	Glu	His	Glu	Cys	Val		
				325					330					335			
Asn	Ala	Asp	Gly	Ser	Tyr	Leu	Cys	Gln	Cys	His	Glu	Gly	Phe	Ala	Leu		
				340					345					350			
Asn	Pro	Asp	Glu	Lys	Thr	Cys	Thr	Arg	Ile	Asn	Tyr	Cys	Ala	Leu	Asn		
				355					360					365			
Lys	Pro	Gly	Cys	Glu	His	Glu	Cys	Val	Asn	Met	Glu	Glu	Ser	Tyr	Tyr		
				370					375					380			
Cys	Arg	Cys	His	Arg	Gly	Tyr	Thr	Leu	Asp	Pro	Asn	Gly	Lys	Thr	Cys		
385					390					395					400		
Ser	Arg	Val	Asp	His	Cys	Ala	Gln	Gln	Asp	His	Gly	Cys	Glu	Gln	Leu		
				405					410					415			
Cys	Leu	Asn	Thr	Glu	Asp	Ser	Phe	Val	Cys	Gln	Cys	Ser	Glu	Gly	Phe		
				420					425					430			
Leu	Ile	Asn	Glu	Asp	Leu	Lys	Thr	Cys	Ser	Arg	Val	Asp	Tyr	Cys	Leu		
				435					440					445			
Leu	Ser	Asp	His	Gly	Cys	Glu	Tyr	Ser	Cys	Val	Asn	Met	Asp	Arg	Ser		
				450					455					460			
Phe	Ala	Cys	Gln	Cys	Pro	Glu	Gly	His	Val	Leu	Arg	Ser	Asp	Gly	Lys		
465					470					475					480		
Thr	Cys	Ala	Lys	Leu	Asp	Ser	Cys	Ala	Leu	Gly	Asp	His	Gly	Cys	Glu		
				485					490					495			
His	Ser	Cys	Val	Ser	Ser	Glu	Asp	Ser	Phe	Val	Cys	Gln	Cys	Phe	Glu		
				500					505					510			

Gly	Tyr	Ile	Leu	Arg	Glu	Asp	Gly	Lys	Thr	Cys	Arg	Arg	Lys	Asp	Val	
		515						520						525		
Cys	Gln	Ala	Ile	Asp	His	Gly	Cys	Glu	His	Ile	Cys	Val	Asn	Ser	Asp	
		530			535						540					
Asp	Ser	Tyr	Thr	Cys	Glu	Cys	Leu	Glu	Gly	Phe	Arg	Leu	Ala	Glu	Asp	
545					550						555			560		
Gly	Lys	Arg	Cys	Arg	Arg	Lys	Asp	Val	Cys	Lys	Ser	Thr	His	His	Gly	
		565						570						575		
Cys	Glu	His	Ile	Cys	Val	Asn	Asn	Gly	Asn	Ser	Tyr	Ile	Cys	Lys	Cys	
		580						585						590		
Ser	Glu	Gly	Phe	Val	Leu	Ala	Glu	Asp	Gly	Arg	Arg	Cys	Lys	Lys	Cys	
		595			600						605					
Thr	Glu	Gly	Pro	Ile	Asp	Leu	Val	Phe	Val	Ile	Asp	Gly	Ser	Lys	Ser	
610					615						620					
Leu	Gly	Glu	Glu	Asn	Phe	Glu	Val	Val	Lys	Gln	Phe	Val	Thr	Gly	Ile	
625					630						635			640		
Ile	Asp	Ser	Leu	Thr	Ile	Ser	Pro	Lys	Ala	Ala	Arg	Val	Gly	Leu	Leu	
		645						650						655		
Gln	Tyr	Ser	Thr	Gln	Val	His	Thr	Glu	Phe	Thr	Leu	Arg	Asn	Phe	Asn	
		660						665						670		
Ser	Ala	Lys	Asp	Met	Lys	Lys	Ala	Val	Ala	His	Met	Lys	Tyr	Met	Gly	
		675			680						685					
Lys	Gly	Ser	Met	Thr	Gly	Leu	Ala	Leu	Lys	His	Met	Phe	Glu	Arg	Ser	
690					695						700					
Phe	Thr	Gln	Gly	Glu	Gly	Ala	Arg	Pro	Leu	Ser	Thr	Arg	Val	Pro	Arg	
705					710						715			720		
Ala	Ala	Ile	Val	Phe	Thr	Asp	Gly	Arg	Ala	Gln	Asp	Asp	Val	Ser	Glu	
		725						730						735		
Trp	Ala	Ser	Lys	Ala	Lys	Ala	Asn	Gly	Ile	Thr	Met	Tyr	Ala	Val	Gly	
		740						745						750		
Val	Gly	Lys	Ala	Ile	Glu	Glu	Glu	Leu	Gln	Glu	Ile	Ala	Ser	Glu	Pro	
		755			760						765					
Thr	Asn	Lys	His	Leu	Phe	Tyr	Ala	Glu	Asp	Phe	Ser	Thr	Met	Asp	Glu	
770					775						780					
Ile	Ser	Glu	Lys	Leu	Lys	Lys	Gly	Ile	Cys	Glu	Ala	Leu	Glu	Asp	Ser	
785					790						795			800		

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<210> 37
<211> 45
<212> DNA
<213> Artificial Sequence
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<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 37

gcctgtcagt gtcttgaggg acacgtgctc cgcagcgatg ggaag

45

<210> 38

<211> 1813

<212> DNA

<213> Homo sapiens

<400> 38

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<210> 39

<211> 390

<212> PRT

<213> Homo sapiens

<400> 39

Met Ile Ser Leu Pro Gly Pro Leu Val Thr Asn Leu Leu Arg Phe Leu

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Leu His Leu Pro Ala Asn Arg Leu Gln Ala Val Glu Gly Gly Glu Val	35	40	45
Val Leu Pro Ala Trp Tyr Thr Leu His Gly Glu Val Ser Ser Ser Gln	50	55	60
Pro Trp Glu Val Pro Phe Val Met Trp Phe Phe Lys Gln Lys Glu Lys	65	70	75
Glu Asp Gln Val Leu Ser Tyr Ile Asn Gly Val Thr Thr Ser Lys Pro	85	90	95
Gly Val Ser Leu Val Tyr Ser Met Pro Ser Arg Asn Leu Ser Leu Arg	100	105	110
Leu Glu Gly Leu Gln Glu Lys Asp Ser Gly Pro Tyr Ser Cys Ser Val	115	120	125
Asn Val Gln Asp Lys Gln Gly Lys Ser Arg Gly His Ser Ile Lys Thr	130	135	140
Leu Glu Leu Asn Val Leu Val Pro Pro Ala Pro Pro Ser Cys Arg Leu	145	150	155
Gln Gly Val Pro His Val Gly Ala Asn Val Thr Leu Ser Cys Gln Ser	165	170	175
Pro Arg Ser Lys Pro Ala Val Gln Tyr Gln Trp Asp Arg Gln Leu Pro	180	185	190
Ser Phe Gln Thr Phe Phe Ala Pro Ala Leu Asp Val Ile Arg Gly Ser	195	200	205
Leu Ser Leu Thr Asn Leu Ser Ser Ser Met Ala Gly Val Tyr Val Cys	210	215	220
Lys Ala His Asn Glu Val Gly Thr Ala Gln Cys Asn Val Thr Leu Glu	225	230	235
Val Ser Thr Gly Pro Gly Ala Ala Val Val Ala Gly Ala Val Val Gly	245	250	255
Thr Leu Val Gly Leu Gly Leu Leu Ala Gly Leu Val Leu Leu Tyr His	260	265	270
Arg Arg Gly Lys Ala Leu Glu Glu Pro Ala Asn Asp Ile Lys Glu Asp	275	280	285

Ala Ile Ala Pro Arg Thr Leu Pro Trp Pro Lys Ser Ser Asp Thr Ile
 290 295 300

Ser Lys Asn Gly Thr Leu Ser Ser Val Thr Ser Ala Arg Ala Leu Arg
 305 310 315 320

Pro Pro His Gly Pro Pro Arg Pro Gly Ala Leu Thr Pro Thr Pro Ser
 325 330 335

Leu Ser Ser Gln Ala Leu Pro Ser Pro Arg Leu Pro Thr Thr Asp Gly
 340 345 350

Ala His Pro Gln Pro Ile Ser Pro Ile Pro Gly Gly Val Ser Ser Ser
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Gly Leu Ser Arg Met Gly Ala Val Pro Val Met Val Pro Ala Gln Ser
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Gln Ala Gly Ser Leu Val
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<210> 40

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 40

agggtctcca ggagaaagac tc

22

<210> 41

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 41

attgtgggcc ttgcagacat agac

24

<210> 42

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 42
 ggccacagca tcaaaacctt agaactcaat gtactggttc ctccagctcc 50

<210> 43
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 43
 gtgtgacaca gcgtgggc 18

<210> 44
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 44
 gaccggcagg cttctgcg 18

<210> 45
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 45
 cagcagcttc agccaccagg agtgg 25

<210> 46
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 46
 ctgagccgtg ggctgcagtc tcgc 24

<210> 47

<211> 45
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 47

ccgactacga ctggtttcttc atcatgcagg atgacacata tgtgc

45

<210> 48

<211> 2822

<212> DNA

<213> Homo sapiens

<400> 48

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```

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```

<210> 49

<211> 690

<212> PRT

<213> Homo sapiens

<400> 49

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Met Lys Arg Leu Pro Leu Leu Val Val Phe Ser Thr Leu Leu Asn Cys
  1                      5                      10                      15

```

```

Ser Tyr Thr Gln Asn Cys Thr Lys Thr Pro Cys Leu Pro Asn Ala Lys
          20                      25                      30

```

```

Cys Glu Ile Arg Asn Gly Ile Glu Ala Cys Tyr Cys Asn Met Gly Phe
          35                      40                      45

```

```

Ser Gly Asn Gly Val Thr Ile Cys Glu Asp Asp Asn Glu Cys Gly Asn
          50                      55                      60

```

```

Leu Thr Gln Ser Cys Gly Glu Asn Ala Asn Cys Thr Asn Thr Glu Gly
          65                      70                      75                      80

```

```

Ser Tyr Tyr Cys Met Cys Val Pro Gly Phe Arg Ser Ser Ser Asn Gln
          85                      90                      95

```

```

Asp Arg Phe Ile Thr Asn Asp Gly Thr Val Cys Ile Glu Asn Val Asn
          100                      105                      110

```

```

Ala Asn Cys His Leu Asp Asn Val Cys Ile Ala Ala Asn Ile Asn Lys
          115                      120                      125

```

```

Thr Leu Thr Lys Ile Arg Ser Ile Lys Glu Pro Val Ala Leu Leu Gln
          130                      135                      140

```

```

Glu Val Tyr Arg Asn Ser Val Thr Asp Leu Ser Pro Thr Asp Ile Ile
          145                      150                      155                      160

```

```

Thr Tyr Ile Glu Ile Leu Ala Glu Ser Ser Ser Leu Leu Gly Tyr Lys
          165                      170                      175

```

```

Asn Asn Thr Ile Ser Ala Lys Asp Thr Leu Ser Asn Ser Thr Leu Thr

```

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Glu	Phe	Val	Lys	Thr	Val	Asn	Asn	Phe	Val	Gln	Arg	Asp	Thr	Phe	Val	
		195				200						205				
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Leu	Met	His	Thr	Val	Glu	Gln	Ala	Thr	Leu	Arg	Ile	Ser	Gln	Ser	Phe	
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Gln	Lys	Thr	Thr	Glu	Phe	Asp	Thr	Asn	Ser	Thr	Asp	Ile	Ala	Leu	Lys	
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Ile	Gly	Pro	Leu	Leu	Ser	Ser	Ser	Asp	Asn	Phe	Leu	Leu	Lys	Pro	Gln	
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Ser	Val	Ser	Met	Ser	Ser	Asn	Pro	Pro	Thr	Leu	Tyr	Glu	Leu	Glu	Lys	
		340						345						350		
Ile	Thr	Phe	Thr	Leu	Ser	His	Arg	Lys	Val	Thr	Asp	Arg	Tyr	Arg	Ser	
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Leu	Cys	Ala	Phe	Trp	Asn	Tyr	Ser	Pro	Asp	Thr	Met	Asn	Gly	Ser	Trp	
		370				375						380				
Ser	Ser	Glu	Gly	Cys	Glu	Leu	Thr	Tyr	Ser	Asn	Glu	Thr	His	Thr	Ser	
		385				390				395				400		
Cys	Arg	Cys	Asn	His	Leu	Thr	His	Phe	Ala	Ile	Leu	Met	Ser	Ser	Gly	
				405				410						415		
Pro	Ser	Ile	Gly	Ile	Lys	Asp	Tyr	Asn	Ile	Leu	Thr	Arg	Ile	Thr	Gln	
		420						425				430				
Leu	Gly	Ile	Ile	Ile	Ser	Leu	Ile	Cys	Leu	Ala	Ile	Cys	Ile	Phe	Thr	
		435				440						445				
Phe	Trp	Phe	Phe	Ser	Glu	Ile	Gln	Ser	Thr	Arg	Thr	Thr	Ile	His	Lys	
		450				455						460				

Asn Leu Cys Cys Ser Leu Phe Leu Ala Glu Leu Val Phe Leu Val Gly
 465 470 475 480
 Ile Asn Thr Asn Thr Asn Lys Leu Phe Cys Ser Ile Ile Ala Gly Leu
 485 490 495
 Leu His Tyr Phe Phe Leu Ala Ala Phe Ala Trp Met Cys Ile Glu Gly
 500 505 510
 Ile His Leu Tyr Leu Ile Val Val Gly Val Ile Tyr Asn Lys Gly Phe
 515 520 525
 Leu His Lys Asn Phe Tyr Ile Phe Gly Tyr Leu Ser Pro Ala Val Val
 530 535 540
 Val Gly Phe Ser Ala Ala Leu Gly Tyr Arg Tyr Tyr Gly Thr Thr Lys
 545 550 555 560
 Val Cys Trp Leu Ser Thr Glu Asn Asn Phe Ile Trp Ser Phe Ile Gly
 565 570 575
 Pro Ala Cys Leu Ile Ile Leu Val Asn Leu Leu Ala Phe Gly Val Ile
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 Ile Tyr Lys Val Phe Arg His Thr Ala Gly Leu Lys Pro Glu Val Ser
 595 600 605
 Cys Phe Glu Asn Ile Arg Ser Cys Ala Arg Gly Ala Leu Ala Leu Leu
 610 615 620
 Phe Leu Leu Gly Thr Thr Trp Ile Phe Gly Val Leu His Val Val His
 625 630 635 640
 Ala Ser Val Val Thr Ala Tyr Leu Phe Thr Val Ser Asn Ala Phe Gln
 645 650 655
 Gly Met Phe Ile Phe Leu Phe Leu Cys Val Leu Ser Arg Lys Ile Gln
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Leu Arg
 690

<210> 50
 <211> 589
 <212> DNA
 <213> Homo sapiens

<220>
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 <222> (61)

<223> a, t, c or g

<400> 50

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gtattggccc ctttgctttc atcatctgac aacttcttat tgaaacctca aaattatgat 180
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tataatatcc ttacaaggat cactcaacta ggaataatta ttccactgat ttgtcttgcc 540
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<210> 51

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 51

ggtaatgagc tccattacag 20

<210> 52

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 52

ggagtagaaa gcgcattg 18

<210> 53

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 53

cacctgatac catgaatggc ag 22

<210> 54

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 54

cgagctcgaa ttaattcg

18

<210> 55

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 55

ggatctcctg agtcagg

18

<210> 56

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 56

cctagttgag tgatccttgt aag

23

<210> 57

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 57

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50

<210> 58

<211> 2137

<212> DNA

<213> Homo sapiens

<400> 58

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<210> 59

<211> 216

<212> PRT

<213> Homo sapiens

<400> 59

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Met Arg Ser Gly Cys Val Val Val His Val Trp Ile Leu Ala Gly Leu
  1             5             10             15

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Trp Leu Ala Val Ala Gly Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro
      20             25             30

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His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg His Leu Tyr
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Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala
      50             55             60

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Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser Leu Leu
 65 70 75 80
 Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly Val His
 85 90 95
 Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu
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 Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro
 115 120 125
 Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro Val Ser
 130 135 140
 Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu
 145 150 155 160
 Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro
 165 170 175
 Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu
 180 185 190
 Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala
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 Val Arg Ser Pro Ser Phe Glu Lys
 210 215

<210> 60

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 60

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26

<210> 61

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 61

gcctcccgtg ctcctgagc agtgccaaac agcggcagtg ta

42

<210> 62
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 62
 ccagtcggt gacaagccca aa 22

<210> 63
 <211> 1295
 <212> DNA
 <213> Homo sapiens

<400> 63
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 aaccccaaag aagactgttt cctccagatt agagtgggaag aaactgggtc ggagtgtctc 300
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<210> 64
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 64
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 20 25 30

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Ala	Cys	Lys	Thr	Pro	Lys	Lys	Thr	Val	Ser	Ser	Arg	Leu	Glu	Trp	Lys
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Lys	Leu	Gly	Arg	Ser	Val	Ser	Phe	Val	Tyr	Tyr	Gln	Gln	Thr	Leu	Gln
65				70						75				80	
Gly	Asp	Phe	Lys	Asn	Arg	Ala	Glu	Met	Ile	Asp	Phe	Asn	Ile	Arg	Ile
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Lys	Asn	Val	Thr	Arg	Ser	Asp	Ala	Gly	Lys	Tyr	Arg	Cys	Glu	Val	Ser
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115						120						125			
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130						135				140					
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Asn	Pro	Ala	Pro	Glu	Tyr	Thr	Trp	Phe	Lys	Asp	Gly	Ile	Arg	Leu	Leu
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Glu	Asn	Pro	Arg	Leu	Gly	Ser	Gln	Ser	Thr	Asn	Ser	Ser	Tyr	Thr	Met
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Asn	Thr	Lys	Thr	Gly	Thr	Leu	Gln	Phe	Asn	Thr	Val	Ser	Lys	Leu	Asp
195						200						205			
Thr	Gly	Glu	Tyr	Ser	Cys	Glu	Ala	Arg	Asn	Ser	Val	Gly	Tyr	Arg	Arg
210						215				220					
Cys	Pro	Gly	Lys	Arg	Met	Gln	Val	Asp	Asp	Leu	Asn	Ile	Ser	Gly	Ile
225				230						235				240	
Ile	Ala	Ala	Val	Val	Val	Val	Ala	Leu	Val	Ile	Ser	Val	Cys	Gly	Leu
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Gly	Val	Cys	Tyr	Ala	Gln	Arg	Lys	Gly	Tyr	Phe	Ser	Lys	Glu	Thr	Ser
		260						265				270			
Phe	Gln	Lys	Ser	Asn	Ser	Ser	Ser	Lys	Ala	Thr	Thr	Met	Ser	Glu	Asn
275						280						285			
Val	Gln	Trp	Leu	Thr	Pro	Val	Ile	Pro	Ala	Leu	Trp	Lys	Ala	Ala	Ala
290						295				300					
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305

310

<210> 65

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 65

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22

<210> 66

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 66

acctgcgata tccaacagaa ttg

23

<210> 67

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 67

ggaagaggat acagtcactc tggaagtatt agtggctcca gcagttcc

48

<210> 68

<211> 2639

<212> DNA

<213> Homo sapiens

<400> 68

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gcatcatgct gctattcctg caaatactga agaagcatgg gatttaaata ttttacttct 180
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<210> 69

<211> 708

<212> PRT

<213> Homo sapiens

<400> 69

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Thr Thr Leu Val Gln Ala Val Asp Lys Lys Val Asp Cys Pro Arg Leu
20 25 30

Cys Thr Cys Glu Ile Arg Pro Trp Phe Thr Pro Arg Ser Ile Tyr Met
35 40 45

Glu Ala Ser Thr Val Asp Cys Asn Asp Leu Gly Leu Leu Thr Phe Pro
50 55 60

Ala Arg Leu Pro Ala Asn Thr Gln Ile Leu Leu Leu Gln Thr Asn Asn
 65 70 75 80
 Ile Ala Lys Ile Glu Tyr Ser Thr Asp Phe Pro Val Asn Leu Thr Gly
 85 90 95
 Leu Asp Leu Ser Gln Asn Asn Leu Ser Ser Val Thr Asn Ile Asn Val
 100 105 110
 Lys Lys Met Pro Gln Leu Leu Ser Val Tyr Leu Glu Glu Asn Lys Leu
 115 120 125
 Thr Glu Leu Pro Glu Lys Cys Leu Ser Glu Leu Ser Asn Leu Gln Glu
 130 135 140
 Leu Tyr Ile Asn His Asn Leu Leu Ser Thr Ile Ser Pro Gly Ala Phe
 145 150 155 160
 Ile Gly Leu His Asn Leu Leu Arg Leu His Leu Asn Ser Asn Arg Leu
 165 170 175
 Gln Met Ile Asn Ser Lys Trp Phe Asp Ala Leu Pro Asn Leu Glu Ile
 180 185 190
 Leu Met Ile Gly Glu Asn Pro Ile Ile Arg Ile Lys Asp Met Asn Phe
 195 200 205
 Lys Pro Leu Ile Asn Leu Arg Ser Leu Val Ile Ala Gly Ile Asn Leu
 210 215 220
 Thr Glu Ile Pro Asp Asn Ala Leu Val Gly Leu Glu Asn Leu Glu Ser
 225 230 235 240
 Ile Ser Phe Tyr Asp Asn Arg Leu Ile Lys Val Pro His Val Ala Leu
 245 250 255
 Gln Lys Val Val Asn Leu Lys Phe Leu Asp Leu Asn Lys Asn Pro Ile
 260 265 270
 Asn Arg Ile Arg Arg Gly Asp Phe Ser Asn Met Leu His Leu Lys Glu
 275 280 285
 Leu Gly Ile Asn Asn Met Pro Glu Leu Ile Ser Ile Asp Ser Leu Ala
 290 295 300
 Val Asp Asn Leu Pro Asp Leu Arg Lys Ile Glu Ala Thr Asn Asn Pro
 305 310 315 320
 Arg Leu Ser Tyr Ile His Pro Asn Ala Phe Phe Arg Leu Pro Lys Leu
 325 330 335
 Glu Ser Leu Met Leu Asn Ser Asn Ala Leu Ser Ala Leu Tyr His Gly

				340				345				350				
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Pro	Ile	Arg	Cys	Asp	Cys	Val	Ile	Arg	Trp	Met	Asn	Met	Asn	Lys	Thr	
	370					375					380					
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385					390					395					400	
Glu	Phe	Gln	Gly	Gln	Asn	Val	Arg	Gln	Val	His	Phe	Arg	Asp	Met	Met	
				405					410					415		
Glu	Ile	Cys	Leu	Pro	Leu	Ile	Ala	Pro	Glu	Ser	Phe	Pro	Ser	Asn	Leu	
			420					425					430			
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		435					440					445				
Glu	Pro	Gln	Pro	Glu	Ile	Tyr	Trp	Ile	Thr	Pro	Ser	Gly	Gln	Lys	Leu	
	450					455					460					
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				485					490					495		
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	530					535					540					
Ser	Lys	Ile	Leu	Lys	Ser	Ser	Val	Lys	Trp	Thr	Ala	Phe	Val	Lys	Thr	
545					550					555					560	
Glu	Asn	Ser	His	Ala	Ala	Gln	Ser	Ala	Arg	Ile	Pro	Ser	Asp	Val	Lys	
				565					570					575		
Val	Tyr	Asn	Leu	Thr	His	Leu	Asn	Pro	Ser	Thr	Glu	Tyr	Lys	Ile	Cys	
			580					585					590			
Ile	Asp	Ile	Pro	Thr	Ile	Tyr	Gln	Lys	Asn	Arg	Lys	Lys	Cys	Val	Asn	
		595					600					605				
Val	Thr	Thr	Lys	Gly	Leu	His	Pro	Asp	Gln	Lys	Glu	Tyr	Glu	Lys	Asn	
	610					615					620					

Asn Thr Thr Thr Leu Met Ala Cys Leu Gly Gly Leu Leu Gly Ile Ile
625 630 635 640

Gly Val Ile Cys Leu Ile Ser Cys Leu Ser Pro Glu Met Asn Cys Asp
645 650 655

Gly Gly His Ser Tyr Val Arg Asn Tyr Leu Gln Lys Pro Thr Phe Ala
660 665 670

Leu Gly Glu Leu Tyr Pro Pro Leu Ile Asn Leu Trp Glu Ala Gly Lys
675 680 685

Glu Lys Ser Thr Ser Leu Lys Val Lys Ala Thr Val Ile Gly Leu Pro
690 695 700

Thr Asn Met Ser
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<210> 70

<211> 1305

<212> DNA

<213> Homo sapiens

<400> 70

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<210> 71

<211> 259

<212> PRT

<213> Homo sapiens

<400> 71

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 Met Cys Pro Lys Gly Cys Leu Cys Ser Ser Ser Gly Gly Leu Asn Val
 35 40 45
 Thr Cys Ser Asn Ala Asn Leu Lys Glu Ile Pro Arg Asp Leu Pro Pro
 50 55 60
 Glu Thr Val Leu Leu Tyr Leu Asp Ser Asn Gln Ile Thr Ser Ile Pro
 65 70 75 80
 Asn Glu Ile Phe Lys Asp Leu His Gln Leu Arg Val Leu Asn Leu Ser
 85 90 95
 Lys Asn Gly Ile Glu Phe Ile Asp Glu His Ala Phe Lys Gly Val Ala
 100 105 110
 Glu Thr Leu Gln Thr Leu Asp Leu Ser Asp Asn Arg Ile Gln Ser Val
 115 120 125
 His Lys Asn Ala Phe Asn Asn Leu Lys Ala Arg Ala Arg Ile Ala Asn
 130 135 140
 Asn Pro Trp His Cys Asp Cys Thr Leu Gln Gln Val Leu Arg Ser Met
 145 150 155 160
 Ala Ser Asn His Glu Thr Ala His Asn Val Ile Cys Lys Thr Ser Val
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 195 200 205
 Thr Met Phe Gly Trp Phe Thr Met Val Ile Ser Tyr Val Val Tyr Tyr
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<210> 72

<211> 2290

<212> DNA

<213> Homo sapiens

<400> 72

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aaaaaaaaa 2290

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<210> 73

<211> 620

<212> PRT

<213> Homo sapiens

<400> 73

Met Gln Val Ser Lys Arg Met Leu Ala Gly Gly Val Arg Ser Met Pro

1

5

10

15

Ser Pro Leu Leu Ala Cys Trp Gln Pro Ile Leu Leu Leu Val Leu Gly
 20 25 30
 Ser Val Leu Ser Gly Ser Ala Thr Gly Cys Pro Pro Arg Cys Glu Cys
 35 40 45
 Ser Ala Gln Asp Arg Ala Val Leu Cys His Arg Lys Cys Phe Val Ala
 50 55 60
 Val Pro Glu Gly Ile Pro Thr Glu Thr Arg Leu Leu Asp Leu Gly Lys
 65 70 75 80
 Asn Arg Ile Lys Thr Leu Asn Gln Asp Glu Phe Ala Ser Phe Pro His
 85 90 95
 Leu Glu Glu Leu Glu Leu Asn Glu Asn Ile Val Ser Ala Val Glu Pro
 100 105 110
 Gly Ala Phe Asn Asn Leu Phe Asn Leu Arg Thr Leu Gly Leu Arg Ser
 115 120 125
 Asn Arg Leu Lys Leu Ile Pro Leu Gly Val Phe Thr Gly Leu Ser Asn
 130 135 140
 Leu Thr Lys Gln Asp Ile Ser Glu Asn Lys Ile Val Ile Leu Leu Asp
 145 150 155 160
 Tyr Met Phe Gln Asp Leu Tyr Asn Leu Lys Ser Leu Glu Val Gly Asp
 165 170 175
 Asn Asp Leu Val Tyr Ile Ser His Arg Ala Phe Ser Gly Leu Asn Ser
 180 185 190
 Leu Glu Gln Leu Thr Leu Glu Lys Cys Asn Leu Thr Ser Ile Pro Thr
 195 200 205
 Glu Ala Leu Ser His Leu His Gly Leu Ile Val Leu Arg Leu Arg His
 210 215 220
 Leu Asn Ile Asn Ala Ile Arg Asp Tyr Ser Phe Lys Arg Leu Tyr Arg
 225 230 235 240
 Leu Lys Val Leu Glu Ile Ser His Trp Pro Tyr Leu Asp Thr Met Thr
 245 250 255
 Pro Asn Cys Leu Tyr Gly Leu Asn Leu Thr Ser Leu Ser Ile Thr His
 260 265 270
 Cys Asn Leu Thr Ala Val Pro Tyr Leu Ala Val Arg His Leu Val Tyr
 275 280 285
 Leu Arg Phe Leu Asn Leu Ser Tyr Asn Pro Ile Ser Thr Ile Glu Gly
 290 295 300

Ser Met Leu His Glu Leu Leu Arg Leu Gln Glu Ile Gln Leu Val Gly
 305 310 315 320
 Gly Gln Leu Ala Val Val Glu Pro Tyr Ala Phe Arg Gly Leu Asn Tyr
 325 330 335
 Leu Arg Val Leu Asn Val Ser Gly Asn Gln Leu Thr Thr Leu Glu Glu
 340 345 350
 Ser Val Phe His Ser Val Gly Asn Leu Glu Thr Leu Ile Leu Asp Ser
 355 360 365
 Asn Pro Leu Ala Cys Asp Cys Arg Leu Leu Trp Val Phe Arg Arg Arg
 370 375 380
 Trp Arg Leu Asn Phe Asn Arg Gln Gln Pro Thr Cys Ala Thr Pro Glu
 385 390 395 400
 Phe Val Gln Gly Lys Glu Phe Lys Asp Phe Pro Asp Val Leu Leu Pro
 405 410 415
 Asn Tyr Phe Thr Cys Arg Arg Ala Arg Ile Arg Asp Arg Lys Ala Gln
 420 425 430
 Gln Val Phe Val Asp Glu Gly His Thr Val Gln Phe Val Cys Arg Ala
 435 440 445
 Asp Gly Asp Pro Pro Pro Ala Ile Leu Trp Leu Ser Pro Arg Lys His
 450 455 460
 Leu Val Ser Ala Lys Ser Asn Gly Arg Leu Thr Val Phe Pro Asp Gly
 465 470 475 480
 Thr Leu Glu Val Arg Tyr Ala Gln Val Gln Asp Asn Gly Thr Tyr Leu
 485 490 495
 Cys Ile Ala Ala Asn Ala Gly Gly Asn Asp Ser Met Pro Ala His Leu
 500 505 510
 His Val Arg Ser Tyr Ser Pro Asp Trp Pro His Gln Pro Asn Lys Thr
 515 520 525
 Phe Ala Phe Ile Ser Asn Gln Pro Gly Glu Gly Glu Ala Asn Ser Thr
 530 535 540
 Arg Ala Thr Val Pro Phe Pro Phe Asp Ile Lys Thr Leu Ile Ile Ala
 545 550 555 560
 Thr Thr Met Gly Phe Ile Ser Phe Leu Gly Val Val Leu Phe Cys Leu
 565 570 575
 Val Leu Leu Phe Leu Trp Ser Arg Gly Lys Gly Asn Thr Lys His Asn

	580		585		590
Ile Glu Ile Glu Tyr Val Pro Arg Lys Ser Asp Ala Gly Ile Ser Ser					
	595		600		605
Ala Asp Ala Pro Arg Lys Phe Asn Met Lys Met Ile					
	610		615		620

<210> 74
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 74
 tcacctggag cctttattgg cc 22

<210> 75
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 75
 ataccagcta taaccaggct gcg 23

<210> 76
 <211> 52
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 76
 caacagtaag tggtttgatg ctcttcctaaa tctagagatt ctgatgattg 50
 gg 52

<210> 77
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 77
 ccatgtgtct cctcctacaa ag 22

<210> 78
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 78
 gggaatagat gtgatctgat tgg 23

<210> 79
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 79
 cacctgtagc aatgcaaadc tcaaggaaat acctagagat cttcctcctg 50

<210> 80
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 80
 agcaaccgcc tgaagctcat cc 22

<210> 81
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 81
 aaggcgcggt gaaagatgta gacg 24

<210> 82

<211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 82
 gactacatgt ttcaggacct gtacaacctc aagtcactgg aggttggcga 50

<210> 83
 <211> 1685
 <212> DNA
 <213> Homo sapiens

<400> 83
 cccacgcgtc cgcacctcgg ccccgggctc cgaagcggct cgggggcgcc ctttcgggtca 60
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 agccagggag ccggccggga agcgcgatgg gggccccagc cgctcgcctc ctgctcctgc 180
 tcttgcgtgt cgctcgtcgc tgggcgcccg gcggggccaa cctctcccag gacgacagcc 240
 agccctggac atctgatgaa acagtgggtg ctggtggcac cgtgggtgctc aagtgccaaag 300
 tgaaagatca cgaggactca tccctgcaat ggtctaacc tgcacagcag actctctact 360
 ttggggagaa gagagccctt cgagataatc gaattcagct ggttacctct acgccccacg 420
 agctcagcat cagcatcagc aatgtggccc tggcagacga gggcgagtac acctgctcaa 480
 tcttcactat gcctgtgcga actgccaaagt cctcgcgtac tgtgctagga attccacaga 540
 agcccatcat cactggttat aaatcttcat tacgggaaaa agacacagcc accctaaact 600
 gtcagtcttc tgggagcaag cctgcagccc ggctcacctg gagaaagggg gaccaagaac 660
 tccacggaga accaaccgcg atacaggaag atcccaatgg taaaaccttc actgtcagca 720
 gtcgggtgac attccagggt acccgggagg atgatggggc gagcatcgtg tgcctctgtga 780
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 tttgtactcg gtttggaatg gggaggagg agggcgggg gaggggaggg ttgccctcag 1560
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 aaaca 1685

<210> 84
 <211> 398
 <212> PRT
 <213> Homo sapiens

<400> 84

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Cys	Cys	Trp	Ala	Pro	Gly	Gly	Ala	Asn	Leu	Ser	Gln	Asp	Asp	Ser	Gln
				20				25					30		
Pro	Trp	Thr	Ser	Asp	Glu	Thr	Val	Val	Ala	Gly	Gly	Thr	Val	Val	Leu
				35			40					45			
Lys	Cys	Gln	Val	Lys	Asp	His	Glu	Asp	Ser	Ser	Leu	Gln	Trp	Ser	Asn
				50		55					60				
Pro	Ala	Gln	Gln	Thr	Leu	Tyr	Phe	Gly	Glu	Lys	Arg	Ala	Leu	Arg	Asp
				65		70				75					80
Asn	Arg	Ile	Gln	Leu	Val	Thr	Ser	Thr	Pro	His	Glu	Leu	Ser	Ile	Ser
				85					90					95	
Ile	Ser	Asn	Val	Ala	Leu	Ala	Asp	Glu	Gly	Glu	Tyr	Thr	Cys	Ser	Ile
				100				105					110		
Phe	Thr	Met	Pro	Val	Arg	Thr	Ala	Lys	Ser	Leu	Val	Thr	Val	Leu	Gly
				115			120					125			
Ile	Pro	Gln	Lys	Pro	Ile	Ile	Thr	Gly	Tyr	Lys	Ser	Ser	Leu	Arg	Glu
				130		135					140				
Lys	Asp	Thr	Ala	Thr	Leu	Asn	Cys	Gln	Ser	Ser	Gly	Ser	Lys	Pro	Ala
				145		150				155				160	
Ala	Arg	Leu	Thr	Trp	Arg	Lys	Gly	Asp	Gln	Glu	Leu	His	Gly	Glu	Pro
				165					170					175	
Thr	Arg	Ile	Gln	Glu	Asp	Pro	Asn	Gly	Lys	Thr	Phe	Thr	Val	Ser	Ser
				180				185					190		
Ser	Val	Thr	Phe	Gln	Val	Thr	Arg	Glu	Asp	Asp	Gly	Ala	Ser	Ile	Val
				195			200					205			
Cys	Ser	Val	Asn	His	Glu	Ser	Leu	Lys	Gly	Ala	Asp	Arg	Ser	Thr	Ser
				210		215					220				
Gln	Arg	Ile	Glu	Val	Leu	Tyr	Thr	Pro	Thr	Ala	Met	Ile	Arg	Pro	Asp
				225		230				235					240
Pro	Pro	His	Pro	Arg	Glu	Gly	Gln	Lys	Leu	Leu	Leu	His	Cys	Glu	Gly
				245				250					255		
Arg	Gly	Asn	Pro	Val	Pro	Gln	Gln	Tyr	Leu	Trp	Glu	Lys	Glu	Gly	Ser
				260				265					270		
Val	Pro	Pro	Leu	Lys	Met	Thr	Gln	Glu	Ser	Ala	Leu	Ile	Phe	Pro	Phe
				275			280					285			

Leu Asn Lys Ser Asp Ser Gly Thr Tyr Gly Cys Thr Ala Thr Ser Asn
 290 295 300

Met Gly Ser Tyr Lys Ala Tyr Tyr Thr Leu Asn Val Asn Asp Pro Ser
 305 310 315 320

Pro Val Pro Ser Ser Ser Ser Thr Tyr His Ala Ile Ile Gly Gly Ile
 325 330 335

Val Ala Phe Ile Val Phe Leu Leu Leu Ile Met Leu Ile Phe Leu Gly
 340 345 350

His Tyr Leu Ile Arg His Lys Gly Thr Tyr Leu Thr His Glu Ala Lys
 355 360 365

Gly Ser Asp Asp Ala Pro Asp Ala Asp Thr Ala Ile Ile Asn Ala Glu
 370 375 380

Gly Gly Gln Ser Gly Gly Asp Asp Lys Lys Glu Tyr Phe Ile
 385 390 395

<210> 85

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 85

gctaggaatt ccacagaagc cc

22

<210> 86

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 86

aacctggaat gtcaccgagc tg

22

<210> 87

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

oligonucleotide probe

<400> 87

cctagcacag tgacgagggga cttggc

26

<210> 88

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 88

aagacacagc caccctaaac tgtcagtctt ctgggagcaa gcctgcagcc

50

<210> 89

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 89

gccctggcag acgagggcga gtacacctgc tcaatcttca ctatgcctgt

50

<210> 90

<211> 2755

<212> DNA

<213> Homo sapiens

<400> 90

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ggggggttagg gaggaaggaa tccacccccca cccccccaaa cccttttctt ctccttttct 60
ggcttcggac attggagcac taaatgaact tgaattgtgt ctgtggcgag caggatggtc 120
gctgttactt tgtgatgaga tcggggatga attgctcgct ttaaaaatgc tgctttggat 180
tctgttgctg gagacgtctc tttgttttgc cgttggaac gttacagggg acgtttgcaa 240
agagaagatc tgttcctgca atgagataga aggggacctc cacgtagact gtgaaaaaaa 300
gggcttcaca agtctgcagc gtttcactgc cccgacttcc cagttttacc atttatttct 360
gcatggcaat tccctcactc gacttttccc taatgagttc gctaactttt ataatgcggg 420
tagtttgac atgaaaaaca atggcttgca tgaaatcggt ccgggggctt ttctggggct 480
gcagctgggtg aaaaggctgc acatcaacaa caacaagatc aagtcttttc gaaagcagac 540
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agaccggggg gccttcagg acttgaacaa gctggagggtg ctcattttta atgacaatct 660
catcagcacc ctacctgcca acgtgttcca gtatgtgccc atcaccacc tcgacctccg 720
gggtaacagg ctgaaaacgc tgccctatga ggaggtcttg gagcaaatcc ctggtattgc 780
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cagactgcag ggtaaagacc tcaatgaaac caccgaacag gacttgtgtc ctttgaaaaa 960
ccgagtggat tctagtctcc cggcgcccc tgcccaagaa gagaccttg ctctggacc 1020
cctgccaact cttttcaaga caaatgggca agaggatcat gccacaccag ggtctgctcc 1080

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aaacggaggt acaaagatcc caggcaactg gcagatcaaa atcagaccca cagcagcgat 1140
agcgacgggt agctccagga acaaaccctt agctaacagt ttaccctgcc ctgggggctg 1200
cagctgcgac cacatcccag ggtcggggtt aaagatgaac tgcaacaaca ggaacgtgag 1260
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caagatccac agcatccgaa aatcgcaact tgtggattac aagaacctca ttctgttgga 1380
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cctgcctgtg gacgtgttcg ctgggggtct gctctctaaa ctacgctgc acaacaatta 1680
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acgcttggtt tccgaagtgc tgatgagcga cctcaagtgt gagacgccgg tgaacttctt 1860
tagaaaggat ttcattgtcc tctccaatga cgagatctgc cctcagctgt acgctaggat 1920
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<210> 91

<211> 696

<212> PRT

<213> Homo sapiens

<400> 91

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Met Leu Leu Trp Ile Leu Leu Leu Glu Thr Ser Leu Cys Phe Ala Ala
  1             5             10            15

```

```

Gly Asn Val Thr Gly Asp Val Cys Lys Glu Lys Ile Cys Ser Cys Asn
      20             25            30

```

```

Glu Ile Glu Gly Asp Leu His Val Asp Cys Glu Lys Lys Gly Phe Thr
      35             40            45

```

```

Ser Leu Gln Arg Phe Thr Ala Pro Thr Ser Gln Phe Tyr His Leu Phe
      50             55            60

```

```

Leu His Gly Asn Ser Leu Thr Arg Leu Phe Pro Asn Glu Phe Ala Asn
      65             70            75            80

```

```

Phe Tyr Asn Ala Val Ser Leu His Met Glu Asn Asn Gly Leu His Glu
      85             90            95

```

Ile Val Pro Gly Ala Phe Leu Gly Leu Gln Leu Val Lys Arg Leu His
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 Ile Asn Asn Asn Lys Ile Lys Ser Phe Arg Lys Gln Thr Phe Leu Gly
 115 120 125
 Leu Asp Asp Leu Glu Tyr Leu Gln Ala Asp Phe Asn Leu Leu Arg Asp
 130 135 140
 Ile Asp Pro Gly Ala Phe Gln Asp Leu Asn Lys Leu Glu Val Leu Ile
 145 150 155 160
 Leu Asn Asp Asn Leu Ile Ser Thr Leu Pro Ala Asn Val Phe Gln Tyr
 165 170 175
 Val Pro Ile Thr His Leu Asp Leu Arg Gly Asn Arg Leu Lys Thr Leu
 180 185 190
 Pro Tyr Glu Glu Val Leu Glu Gln Ile Pro Gly Ile Ala Glu Ile Leu
 195 200 205
 Leu Glu Asp Asn Pro Trp Asp Cys Thr Cys Asp Leu Leu Ser Leu Lys
 210 215 220
 Glu Trp Leu Glu Asn Ile Pro Lys Asn Ala Leu Ile Gly Arg Val Val
 225 230 235 240
 Cys Glu Ala Pro Thr Arg Leu Gln Gly Lys Asp Leu Asn Glu Thr Thr
 245 250 255
 Glu Gln Asp Leu Cys Pro Leu Lys Asn Arg Val Asp Ser Ser Leu Pro
 260 265 270
 Ala Pro Pro Ala Gln Glu Glu Thr Phe Ala Pro Gly Pro Leu Pro Thr
 275 280 285
 Pro Phe Lys Thr Asn Gly Gln Glu Asp His Ala Thr Pro Gly Ser Ala
 290 295 300
 Pro Asn Gly Gly Thr Lys Ile Pro Gly Asn Trp Gln Ile Lys Ile Arg
 305 310 315 320
 Pro Thr Ala Ala Ile Ala Thr Gly Ser Ser Arg Asn Lys Pro Leu Ala
 325 330 335
 Asn Ser Leu Pro Cys Pro Gly Gly Cys Ser Cys Asp His Ile Pro Gly
 340 345 350
 Ser Gly Leu Lys Met Asn Cys Asn Asn Arg Asn Val Ser Ser Leu Ala
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 Asp Leu Lys Pro Lys Leu Ser Asn Val Gln Glu Leu Phe Leu Arg Asp
 370 375 380

Asn Lys Ile His Ser Ile Arg Lys Ser His Phe Val Asp Tyr Lys Asn
 385 390 395 400
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 405 410 415
 Asn Thr Phe Lys Asn Leu Leu Asp Leu Arg Trp Leu Tyr Met Asp Ser
 420 425 430
 Asn Tyr Leu Asp Thr Leu Ser Arg Glu Lys Phe Ala Gly Leu Gln Asn
 435 440 445
 Leu Glu Tyr Leu Asn Val Glu Tyr Asn Ala Ile Gln Leu Ile Leu Pro
 450 455 460
 Gly Thr Phe Asn Ala Met Pro Lys Leu Arg Ile Leu Ile Leu Asn Asn
 465 470 475 480
 Asn Leu Leu Arg Ser Leu Pro Val Asp Val Phe Ala Gly Val Ser Leu
 485 490 495
 Ser Lys Leu Ser Leu His Asn Asn Tyr Phe Met Tyr Leu Pro Val Ala
 500 505 510
 Gly Val Leu Asp Gln Leu Thr Ser Ile Ile Gln Ile Asp Leu His Gly
 515 520 525
 Asn Pro Trp Glu Cys Ser Cys Thr Ile Val Pro Phe Lys Gln Trp Ala
 530 535 540
 Glu Arg Leu Gly Ser Glu Val Leu Met Ser Asp Leu Lys Cys Glu Thr
 545 550 555 560
 Pro Val Asn Phe Phe Arg Lys Asp Phe Met Leu Leu Ser Asn Asp Glu
 565 570 575
 Ile Cys Pro Gln Leu Tyr Ala Arg Ile Ser Pro Thr Leu Thr Ser His
 580 585 590
 Ser Lys Asn Ser Thr Gly Leu Ala Glu Thr Gly Thr His Ser Asn Ser
 595 600 605
 Tyr Leu Asp Thr Ser Arg Val Ser Ile Ser Val Leu Val Pro Gly Leu
 610 615 620
 Leu Leu Val Phe Val Thr Ser Ala Phe Thr Val Val Gly Met Leu Val
 625 630 635 640
 Phe Ile Leu Arg Asn Arg Lys Arg Ser Lys Arg Arg Asp Ala Asn Ser
 645 650 655
 Ser Ala Ser Glu Ile Asn Ser Leu Gln Thr Val Cys Asp Ser Ser Tyr

660 665 670

Trp His Asn Gly Pro Tyr Asn Ala Asp Gly Ala His Arg Val Tyr Asp
675 680 685

Cys Gly Ser His Ser Leu Ser Asp
690 695

<210> 92
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 92
gttgatctg ggcaacaata ac 22

<210> 93
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 93
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<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

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<212> DNA
<213> Homo sapiens

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<211> 490

<212> PRT

<213> Homo sapiens

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Glu	Arg	Arg	Arg 100	Ser	His	Cys	Thr	Leu 105	Glu	Asn	Glu	Pro	Leu 110	Arg	Gly
Phe	Ser	Trp 115	Leu	Ser	Ser	Asp	Pro 120	Gly	Gly	Leu	Glu	Ser 125	Asp	Thr	Leu
Gln	Trp 130	Val	Glu	Glu	Pro	Gln 135	Arg	Ser	Cys	Thr	Ala 140	Arg	Arg	Cys	Ala
Val 145	Leu	Gln	Ala	Thr	Gly 150	Gly	Val	Glu	Pro 155	Ala	Gly	Trp	Lys	Glu	Met 160
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Ile	Arg	Val	Asp	Glu 325	Lys	Leu	Gly	Glu	Thr 330	Pro	Leu	Val	Pro	Glu 335	Gln
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Ser Ser Ala Thr Pro Gln Ala Phe Asp Ser Ser Ser Ala Val Val Phe	385		390		395
Ile Phe Val Ser Thr Ala Val Val Val Leu Val Ile Leu Thr Met Thr		405		410	415
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Pro Arg Lys Glu Ser Met Gly Pro Pro Gly Leu Glu Ser Asp Pro Glu		435		440	445
Pro Ala Ala Leu Gly Ser Ser Ser Ala His Cys Thr Asn Asn Gly Val		450		455	460
Lys Val Gly Asp Cys Asp Leu Arg Asp Arg Ala Glu Gly Ala Leu Leu	465		470		475
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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

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<210> 98

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 98

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 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

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 <223> Description of Artificial Sequence: Synthetic
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 <210> 101
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 <212> DNA
 <213> Homo sapiens

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<211> 415

<212> PRT

<213> Homo sapiens

<400> 104

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 Gly Ala Leu Val Ser Ser Gly Asn Lys Met Met Val Gln Met Ile Ser
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 Pro Ser Gly Ser Phe Lys Thr Pro Asn Trp Pro Asp Arg Asp Tyr Pro
 165 170 175
 Ala Gly Val Thr Cys Val Trp His Ile Val Ala Pro Lys Asn Gln Leu
 180 185 190
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<213> Artificial Sequence

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oligonucleotide probe

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<210> 106

<211> 22

<212> DNA

<213> Artificial Sequence

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oligonucleotide probe

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gtcaaggagt cctccacaat ac

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<210> 107

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<212> DNA

<213> Homo sapiens

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 cgccctgctg agctgagtga ggagctgggt gagagctggg ggtttcacia gcagcaggag 480
 gccccggacc tcttccagt gctgtgctca gattccctga agctctgctg ccccgaggc 540
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 gggcagtgtg aaggagaagg gacacgagg ggcagcgggc actgtgactg ccaagccggc 660
 tacgggggtg aggcctgtgg ccagtgtggc cttggctact ttgaggcaga acgcaacgcc 720
 agccatctgg tatgttcggc ttgttttggc cctgtgccc gatgctcagg acctgaggaa 780
 tcaaaactgt tgcaatgcaa gaagggtgg gccctgcac acctcaagtg tgtagacatt 840
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<210> 109

<211> 420

<212> PRT

<213> Homo sapiens

<400> 109

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Pro | Trp | Pro | Pro | Lys | Gly | Leu | Val | Pro | Ala | Val | Leu | Trp | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Leu | Ser | Leu | Phe | Leu | Asn | Leu | Pro | Gly | Pro | Ile | Trp | Leu | Gln | Pro | Ser |
| | | | 20 | | | | | | 25 | | | | 30 | | |
| | | | | | | | | | | | | | | | |
| Pro | Pro | Pro | Gln | Ser | Ser | Pro | Pro | Pro | Gln | Pro | His | Pro | Cys | His | Thr |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| | | | | | | | | | | | | | | | |
| Cys | Arg | Gly | Leu | Val | Asp | Ser | Phe | Asn | Lys | Gly | Leu | Glu | Arg | Thr | Ile |
| | | | 50 | | | | 55 | | | | 60 | | | | |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|
| Arg
65 | Asp | Asn | Phe | Gly | Gly
70 | Gly | Asn | Thr | Ala | Trp
75 | Glu | Glu | Glu | Asn | Leu
80 |
| Ser | Lys | Tyr | Lys | Asp
85 | Ser | Glu | Thr | Arg | Leu
90 | Val | Glu | Val | Leu | Glu
95 | Gly |
| Val | Cys | Ser | Lys
100 | Ser | Asp | Phe | Glu | Cys
105 | His | Arg | Leu | Leu | Glu
110 | Leu | Ser |
| Glu | Glu | Leu
115 | Val | Glu | Ser | Trp | Trp
120 | Phe | His | Lys | Gln | Gln
125 | Glu | Ala | Pro |
| Asp | Leu
130 | Phe | Gln | Trp | Leu | Cys
135 | Ser | Asp | Ser | Leu | Lys
140 | Leu | Cys | Cys | Pro |
| Ala
145 | Gly | Thr | Phe | Gly | Pro
150 | Ser | Cys | Leu | Pro | Cys
155 | Pro | Gly | Gly | Thr | Glu
160 |
| Arg | Pro | Cys | Gly
165 | Gly | Tyr | Gly | Gln | Cys
170 | Glu | Gly | Glu | Gly | Thr
175 | Arg | Gly |
| Gly | Ser | Gly | His
180 | Cys | Asp | Cys | Gln | Ala
185 | Gly | Tyr | Gly | Gly | Glu
190 | Ala | Cys |
| Gly | Gln
195 | Cys | Gly | Leu | Gly | Tyr | Phe
200 | Glu | Ala | Glu | Arg | Asn
205 | Ala | Ser | His |
| Leu
210 | Val | Cys | Ser | Ala | Cys | Phe
215 | Gly | Pro | Cys | Ala | Arg
220 | Cys | Ser | Gly | Pro |
| Glu
225 | Glu | Ser | Asn | Cys
230 | Leu | Gln | Cys | Lys | Lys | Gly
235 | Trp | Ala | Leu | His | His
240 |
| Leu | Lys | Cys | Val
245 | Asp | Ile | Asp | Glu | Cys | Gly
250 | Thr | Glu | Gly | Ala
255 | Asn | Cys |
| Gly | Ala | Asp | Gln
260 | Phe | Cys | Val | Asn
265 | Thr | Glu | Gly | Ser | Tyr
270 | Glu | Cys | Arg |
| Asp | Cys | Ala
275 | Lys | Ala | Cys | Leu | Gly
280 | Cys | Met | Gly | Ala | Gly
285 | Pro | Gly | Arg |
| Cys | Lys
290 | Lys | Cys | Ser | Pro | Gly
295 | Tyr | Gln | Gln | Val | Gly
300 | Ser | Lys | Cys | Leu |
| Asp
305 | Val | Asp | Glu | Cys
310 | Glu | Thr | Glu | Val | Cys | Pro
315 | Gly | Glu | Asn | Lys | Gln
320 |
| Cys | Glu | Asn | Thr
325 | Glu | Gly | Gly | Tyr | Arg | Cys
330 | Ile | Cys | Ala | Glu
335 | Gly | Tyr |
| Lys | Gln | Met
340 | Glu | Gly | Ile | Cys | Val
345 | Lys | Glu | Gln | Ile | Pro
350 | Glu | Ser | Ala |

Gly Phe Phe Ser Glu Met Thr Glu Asp Glu Leu Val Val Leu Gln Gln
 355 360 365

Met Phe Phe Gly Ile Ile Ile Cys Ala Leu Ala Thr Leu Ala Ala Lys
 370 375 380

Gly Asp Leu Val Phe Thr Ala Ile Phe Ile Gly Ala Val Ala Ala Met
 385 390 395 400

Thr Gly Tyr Trp Leu Ser Glu Arg Ser Asp Arg Val Leu Glu Gly Phe
 405 410 415

Ile Lys Gly Arg
 420

<210> 110

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 110

cctggctatc agcaggtggg ctccaagtgt ctcgatgtgg atgagtgtga

50

<210> 111

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 111

attctgcgtg aacactgagg gc

22

<210> 112

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 112

atctgcttgt agccctcggc ac

22

<210> 113

<211> 1616
 <212> DNA
 <213> Homo sapiens

<220>
 <221> modified_base
 <222> (1461)
 <223> a, t, c or g

<400> 113
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 cggggccgcc ctgaccgggg agcagctcct gggcagcctg ctgcggcagc tgcagctcaa 180
 agaggtgccc accctggaca gggccgacat ggaggagctg gtcaccccca cccacgtgag 240
 ggcccagtac gtggccctgc tgcagcgcag ccacggggac cgctcccgcg gaaagaggtt 300
 cagccagagc ttccgagagg tggccggcag gttcctggcg ttggaggcca gcacacacct 360
 gctggtgttc ggcattggagc agcggctgcc gcccaacagc gagctggtgc aggccgtgct 420
 gcggctcttc caggagccgg tccccaaagg cgcgctgcac aggcacgggc ggctgtcccc 480
 gcgcagcgcc cggggccggg tgaccgtcga gtggctgcgc gtccgcgacg acggctccaa 540
 ccgcacctcc ctcatcgact ccaggctggt gtccgtccac gagagcggct ggaaggcctt 600
 cgacgtgacc gaggccgtga acttctggca gcagctgagc cggccccggc agccgctgct 660
 gctacaggtg tcggtgcaga gggagcatct gggcccgtg gcgtccggcg cccacaagct 720
 ggcccgcttt gcctcgagg gggcgccagc cgggcttggg gagccccagc tggagctgca 780
 caccctggac cttggggact atggagctca gggcgactgt gaccctgaag caccaatgac 840
 cgagggcacc cgctgctgcc gccaggagat gtacattgac ctgcagggga tgaagtgggc 900
 cgagaactgg gtgctggagc ccccgggctt cctggcttat gagtgtgtgg gcacctgccg 960
 gcagcccccg gaggccctgg ccttcaagtg gccgtttctg gggcctcgac agtgcacgcg 1020
 ctcgagact gactcgctgc ccatgatcgt cagcatcaag gagggaggca ggaccaggcc 1080
 ccagggtggtc agcctgccc acatgagggt gcagaagtgc agctgtgctt cggatggtgc 1140
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 gtgtgtgttt ctgaagtgtt cgagggtacc aggagagctg gcgatgactg aactgctgat 1260
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 aaagtcctcc accaccactc tggacctaag acctgggggt aagtgtgggt tgtgcacccc 1560
 caatccagat aataaagact ttgtaaaaca tgaataaaac acattttatt ctaaaa 1616

<210> 114
 <211> 366
 <212> PRT
 <213> Homo sapiens

<400> 114
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 1 5 10 15
 Ser Pro Gly Ala Ala Leu Thr Gly Glu Gln Leu Leu Gly Ser Leu Leu
 20 25 30
 Arg Gln Leu Gln Leu Lys Glu Val Pro Thr Leu Asp Arg Ala Asp Met
 35 40 45

Glu Glu Leu Val Ile Pro Thr His Val Arg Ala Gln Tyr Val Ala Leu
 50 55 60
 Leu Gln Arg Ser His Gly Asp Arg Ser Arg Gly Lys Arg Phe Ser Gln
 65 70 75 80
 Ser Phe Arg Glu Val Ala Gly Arg Phe Leu Ala Leu Glu Ala Ser Thr
 85 90 95
 His Leu Leu Val Phe Gly Met Glu Gln Arg Leu Pro Pro Asn Ser Glu
 100 105 110
 Leu Val Gln Ala Val Leu Arg Leu Phe Gln Glu Pro Val Pro Lys Ala
 115 120 125
 Ala Leu His Arg His Gly Arg Leu Ser Pro Arg Ser Ala Arg Ala Arg
 130 135 140
 Val Thr Val Glu Trp Leu Arg Val Arg Asp Asp Gly Ser Asn Arg Thr
 145 150 155 160
 Ser Leu Ile Asp Ser Arg Leu Val Ser Val His Glu Ser Gly Trp Lys
 165 170 175
 Ala Phe Asp Val Thr Glu Ala Val Asn Phe Trp Gln Gln Leu Ser Arg
 180 185 190
 Pro Arg Gln Pro Leu Leu Leu Gln Val Ser Val Gln Arg Glu His Leu
 195 200 205
 Gly Pro Leu Ala Ser Gly Ala His Lys Leu Val Arg Phe Ala Ser Gln
 210 215 220
 Gly Ala Pro Ala Gly Leu Gly Glu Pro Gln Leu Glu Leu His Thr Leu
 225 230 235 240
 Asp Leu Gly Asp Tyr Gly Ala Gln Gly Asp Cys Asp Pro Glu Ala Pro
 245 250 255
 Met Thr Glu Gly Thr Arg Cys Cys Arg Gln Glu Met Tyr Ile Asp Leu
 260 265 270
 Gln Gly Met Lys Trp Ala Glu Asn Trp Val Leu Glu Pro Pro Gly Phe
 275 280 285
 Leu Ala Tyr Glu Cys Val Gly Thr Cys Arg Gln Pro Pro Glu Ala Leu
 290 295 300
 Ala Phe Lys Trp Pro Phe Leu Gly Pro Arg Gln Cys Ile Ala Ser Glu
 305 310 315 320
 Thr Asp Ser Leu Pro Met Ile Val Ser Ile Lys Glu Gly Gly Arg Thr
 325 330 335

Arg Pro Gln Val Val Ser Leu Pro Asn Met Arg Val Gln Lys Cys Ser
 340 345 350

Cys Ala Ser Asp Gly Ala Leu Val Pro Arg Arg Leu Gln Pro
 355 360 365

<210> 115

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 115

aggactgccca taacttgct g

21

<210> 116

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 116

ataggagttg aagcagcgct gc

22

<210> 117

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 117

tgtgtggaca tagacgagtg ccgctaccgc tactgccagc accgc

45

<210> 118

<211> 1857

<212> DNA

<213> Homo sapiens

<400> 118

gtctgttccc aggagtcctt cggcggctgt tgtgtcagtg gctgacgc gatggggaca 60
 aaggcgcaag tcgagaggaa actgttgtgc ctcttcata tggcgatcct gttgtgctcc 120
 ctggcattgg gcagtgttac agtgcactct tctgaacctg aagtcagaat tctgagaat 180

```

aatcctgtga agttgtcctg tgcctactcg ggcttttctt ctccccgtgt ggagtgggaag 240
tttgaccaag gagacaccac cagactcgtt tgctataata acaagatcac agcttcctat 300
gaggaccggg tgaccttctt gccaaactgg atcaccttca agtccgtgac acgggaagac 360
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gtcaagctca tcgtgcttgt gcctccatcc aagcctacag ttaacatccc ctctctgcc 480
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ggagaaaccc tactggaaat acaaagttag ccaggcatgg tgggtgcatg ctgtagtccc 1800
agctgctcag gagcctggca acaagagcaa aactccagct caaaaaaaaa aaaaaaa 1857

```

<210> 119

<211> 299

<212> PRT

<213> Homo sapiens

<400> 119

```

Met Gly Thr Lys Ala Gln Val Glu Arg Lys Leu Leu Cys Leu Phe Ile
  1              5              10              15

```

```

Leu Ala Ile Leu Leu Cys Ser Leu Ala Leu Gly Ser Val Thr Val His
      20              25              30

```

```

Ser Ser Glu Pro Glu Val Arg Ile Pro Glu Asn Asn Pro Val Lys Leu
      35              40              45

```

```

Ser Cys Ala Tyr Ser Gly Phe Ser Ser Pro Arg Val Glu Trp Lys Phe
      50              55              60

```

```

Asp Gln Gly Asp Thr Thr Arg Leu Val Cys Tyr Asn Asn Lys Ile Thr
      65              70              75              80

```

```

Ala Ser Tyr Glu Asp Arg Val Thr Phe Leu Pro Thr Gly Ile Thr Phe
      85              90              95

```

Lys Ser Val Thr Arg Glu Asp Thr Gly Thr Tyr Thr Cys Met Val Ser
 100 105 110
 Glu Glu Gly Gly Asn Ser Tyr Gly Glu Val Lys Val Lys Leu Ile Val
 115 120 125
 Leu Val Pro Pro Ser Lys Pro Thr Val Asn Ile Pro Ser Ser Ala Thr
 130 135 140
 Ile Gly Asn Arg Ala Val Leu Thr Cys Ser Glu Gln Asp Gly Ser Pro
 145 150 155 160
 Pro Ser Glu Tyr Thr Trp Phe Lys Asp Gly Ile Val Met Pro Thr Asn
 165 170 175
 Pro Lys Ser Thr Arg Ala Phe Ser Asn Ser Ser Tyr Val Leu Asn Pro
 180 185 190
 Thr Thr Gly Glu Leu Val Phe Asp Pro Leu Ser Ala Ser Asp Thr Gly
 195 200 205
 Glu Tyr Ser Cys Glu Ala Arg Asn Gly Tyr Gly Thr Pro Met Thr Ser
 210 215 220
 Asn Ala Val Arg Met Glu Ala Val Glu Arg Asn Val Gly Val Ile Val
 225 230 235 240
 Ala Ala Val Leu Val Thr Leu Ile Leu Leu Gly Ile Leu Val Phe Gly
 245 250 255
 Ile Trp Phe Ala Tyr Ser Arg Gly His Phe Asp Arg Thr Lys Lys Gly
 260 265 270
 Thr Ser Ser Lys Lys Val Ile Tyr Ser Gln Pro Ser Ala Arg Ser Glu
 275 280 285
 Gly Glu Phe Lys Gln Thr Ser Ser Phe Leu Val
 290 295

<210> 120

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 120

tcgcggagct gtgttctggt tccc

24

<210> 121

<211> 50

<220>
<223> Description of Artificial Sequence: Synthetic

oligonucleotide probe

<400> 125

actcagcagt ggtaggaaag

20

<210> 126

<211> 1210

<212> DNA

<213> Homo sapiens

<400> 126

```

cagcgcgtgg cggcgccgc tgtggggaca gcatgagcgg cggttggatg ggcaggttg 60
gagcgtggcg aacaggggct ctgggcctgg cgctgctgct gctgctcggc ctgggactag 120
gcctggaggc cgccgcgagc ccgctttcca ccccgacctc tgcccaggcc gcaggcccca 180
gctcaggctc gtgcccaccc accaagttcc agtgccgcac cagtggctta tgcgtgcccc 240
tcacctggcg ctgcgacagg gacttggact gcagcgatgg cagcgatgag gaggagtgca 300
ggattgagcc atgtacccag aaagggcaat gcccaccgcc ccctggcctc ccctgccccct 360
gcaccggcgt cagtgactgc tctgggggaa ctgacaagaa actgcgcaac tgcagccgcc 420
tggcctgcct agcaggcgag ctccgttgca cgctgagcga tgactgcatt ccactcacgt 480
ggcgtgcgga cggccaccca gactgtcccg actccagcga cgagctcggc tgtggaacca 540
atgagatcct cccggaaggg gatgccacaa ccatggggcc ccctgtgacc ctggagagtg 600
tcacctctct caggaatgcc acaaccatgg ggccccctgt gacctggag agtgccccct 660
ctgtcgggaa tgccacatcc tctctgccc gagaccagtc tggaaagcca actgcctatg 720
gggttattgc agctgctgcg gtgctcagtg caagcctggt caccgccacc ctctcctttt 780
tgtcctggct ccgagcccag gagcgccctc gccactggg gttactggtg gccatgaagg 840
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ccgtcactca gccctgggcg tagccggaca ggaggagagc agtgatgcgg atgggtacct 960
gggcacacca gccctcagag acctgagttc ttctggccac gtggaacctc gaaccgcagc 1020
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agctaggatg gggaaacctgc cacagccaga actgaggggc tggccccagg cagctcccag 1140
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aagttgcttc                                     1210

```

<210> 127

<211> 282

<212> PRT

<213> Homo sapiens

<400> 127

```

Met Ser Gly Gly Trp Met Ala Gln Val Gly Ala Trp Arg Thr Gly Ala
  1           5           10           15

```

```

Leu Gly Leu Ala Leu Leu Leu Leu Leu Gly Leu Gly Leu Gly Leu Glu
      20           25           30

```

```

Ala Ala Ala Ser Pro Leu Ser Thr Pro Thr Ser Ala Gln Ala Ala Gly
      35           40           45

```

```

Pro Ser Ser Gly Ser Cys Pro Pro Thr Lys Phe Gln Cys Arg Thr Ser
      50           55           60

```

```

Gly Leu Cys Val Pro Leu Thr Trp Arg Cys Asp Arg Asp Leu Asp Cys
      65           70           75           80

```

Ser Asp Gly Ser Asp Glu Glu Glu Cys Arg Ile Glu Pro Cys Thr Gln
 85 90 95
 Lys Gly Gln Cys Pro Pro Pro Pro Gly Leu Pro Cys Pro Cys Thr Gly
 100 105 110
 Val Ser Asp Cys Ser Gly Gly Thr Asp Lys Lys Leu Arg Asn Cys Ser
 115 120 125
 Arg Leu Ala Cys Leu Ala Gly Glu Leu Arg Cys Thr Leu Ser Asp Asp
 130 135 140
 Cys Ile Pro Leu Thr Trp Arg Cys Asp Gly His Pro Asp Cys Pro Asp
 145 150 155 160
 Ser Ser Asp Glu Leu Gly Cys Gly Thr Asn Glu Ile Leu Pro Glu Gly
 165 170 175
 Asp Ala Thr Thr Met Gly Pro Pro Val Thr Leu Glu Ser Val Thr Ser
 180 185 190
 Leu Arg Asn Ala Thr Thr Met Gly Pro Pro Val Thr Leu Glu Ser Val
 195 200 205
 Pro Ser Val Gly Asn Ala Thr Ser Ser Ser Ala Gly Asp Gln Ser Gly
 210 215 220
 Ser Pro Thr Ala Tyr Gly Val Ile Ala Ala Ala Ala Val Leu Ser Ala
 225 230 235 240
 Ser Leu Val Thr Ala Thr Leu Leu Leu Leu Ser Trp Leu Arg Ala Gln
 245 250 255
 Glu Arg Leu Arg Pro Leu Gly Leu Leu Val Ala Met Lys Glu Ser Leu
 260 265 270
 Leu Leu Ser Glu Gln Lys Thr Ser Leu Pro
 275 280

<210> 128

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 128

aagttccagt gccgcaccag tggc

<210> 129

<211> 24
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 129

ttggttccac agccgagctc gtcg

24

<210> 130

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 130

gaggaggagt gcaggattga gccatgtacc cagaaagggc aatgcccacc

50

<210> 131

<211> 1843

<212> DNA

<213> Homo sapiens

<220>

<221> modified_base

<222> (1837)

<223> a, t, c or g

<400> 131

```

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cagactcttg caagctggat gccctctgtg gatgaaagat gtatcatgga atgaaccga 180
gcaatggaga tggatttcta gacgacgagc agcagcagca gcaacctcag tccccccaga 240
gactcttggc cgtgatcctg tggtttcagc tggcgctgtg cttcggccct gcacagctca 300
cgggcggggt cgatgacctt caagtgtgtg ctgaccccg cttcccgag aatggcttca 360
ggacccccag cggagggggt ttctttgaag gctctgtagc ccgatttcac tgccaagacg 420
gattcaagct gaagggcgct acaaagagac tgtgtttgaa gcattttaat ggaaccctag 480
gctggatccc aagtataat tccatctgtg tgcaagaaga ttgccgtatc cctcaaactg 540
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acatcacctg ccagtatgga gagtggtttc cttcttatca agtctactgc atcaaactcag 1080
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```



```
<210> 132
<211> 490
<212> PRT
<213> Homo sapiens
```

Met Tyr His Gly Met Asn Pro Ser Asn Gly Asp Gly Phe Leu Glu Gln
1 5 10 15

Ile Leu Trp Phe Gln Leu Ala Leu Cys Phe Gly Pro Ala Gln Leu Thr
35 40 45

Asn Gly Phe Arg Thr Pro Ser Gly Gly Val Phe Phe Glu Gly Ser Val
65 70 75 80

Arg Leu Cys Leu Lys His Phe Asn Gly Thr Leu Gly Trp Ile Pro Ser
100 105 110

Asp Ala Glu Ile His Asn Lys Thr Tyr Arg His Gly Glu Lys Leu Ile
130 135 140

Met Val Ser Leu Cys Arg Asp Asp Gly Thr Trp Asn Asn Leu Pro Ile
165 170 175

Cys Gln Gly Cys Leu Arg Pro Leu Ala Ser Ser Asn Gly Tyr Val Asn

[illegible]

Ile Ala Ser Thr Ala Glu Glu Val Ala Ser Thr Ser Pro Gly Ile His
465 470 475 480

His Ala His Trp Val Leu Phe Leu Arg Asn
485 490

<210> 133

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 133

atctcctatc gctgctttcc cgg

23

<210> 134

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 134

agccaggatc gcagtaaaac tcc

23

<210> 135

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 135

atttaaactt gatgggtctg cgtatcttga gtgcttaca aaccttatct

50

<210> 136

<211> 1815

<212> DNA

<213> Homo sapiens

<400> 136

cccacgcgtc cgctccgcgc cctccccccc gcctcccgctg cggtcgctcg gtggcctaga 60
gatgctgctg ccgcgggttg agttgtcgcg cagcctctg ccgccagcc cgctccaccg 120
ccgtagcgcc cgagtgtcgg ggggcgcacc cgagtcgggc catgaggccg ggaaccgcgc 180
tacaggccgt gctgctggcc gtgctgctgg tggggctgcg ggccgcgacg ggtcgctgc 240
tgagtgcctc ggatttgac ctcagaggag ggcagccagt ctgccgggga gggacacaga 300

```

ggccttggtta taaagtcatt tacttccatg atactttctcg aagactgaac tttgaggaag 360
ccaaagaagc ctgcaggagg gatggaggcc agctagtcag catcgagtct gaagatgaac 420
agaaactgat agaaaagttc attgaaaacc tcttgccatc tgatggtgac ttctggattg 480
ggctcaggag gcgtgaggag aaacaaagca atagcacagc ctgccaggac ctttatgctt 540
ggactgatgg cagcatatca caatttagga actggtatgt ggatgagccg tcctgcggca 600
gcgaggtctg cgtgggtcatg taccatcagc catcggcacc cgctggcatc ggaggccccct 660
acatgttcca gtggaatgat gaccggtgca acatgaagaa caatttcatt tgcaaatatt 720
ctgatgagaa accagcagtt ccttctagag aagctgaagg tgaggaaaca gagctgacaa 780
cacctgtact tccagaagaa acacaggaag aagatgccaa aaaaacattt aaagaaagta 840
gagaagctgc cttgaatctg gcctacatcc taatccccag cattccccct ctcctctctc 900
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atattatcat acagacagaa aatccagaat cttttcaaag cccacatatg gtagcacagg 1740
ttggcctgtg catcggaat tctcatatct gtttttttca aagaataaaa tcaaataaag 1800
agcaggaaaa aaaaa 1815

```

<210> 137

<211> 382

<212> PRT

<213> Homo sapiens

<400> 137

```

Met Arg Pro Gly Thr Ala Leu Gln Ala Val Leu Leu Ala Val Leu Leu
  1                      5                      10                     15

```

```

Val Gly Leu Arg Ala Ala Thr Gly Arg Leu Leu Ser Ala Ser Asp Leu
                20                      25                     30

```

```

Asp Leu Arg Gly Gly Gln Pro Val Cys Arg Gly Gly Thr Gln Arg Pro
    35                      40                     45

```

```

Cys Tyr Lys Val Ile Tyr Phe His Asp Thr Ser Arg Arg Leu Asn Phe
    50                      55                     60

```

```

Glu Glu Ala Lys Glu Ala Cys Arg Arg Asp Gly Gly Gln Leu Val Ser
    65                      70                     75                     80

```

```

Ile Glu Ser Glu Asp Glu Gln Lys Leu Ile Glu Lys Phe Ile Glu Asn
                85                      90                     95

```

```

Leu Leu Pro Ser Asp Gly Asp Phe Trp Ile Gly Leu Arg Arg Arg Glu
    100                     105                    110

```

Glu Lys Gln Ser Asn Ser Thr Ala Cys Gln Asp Leu Tyr Ala Trp Thr
 115 120 125
 Asp Gly Ser Ile Ser Gln Phe Arg Asn Trp Tyr Val Asp Glu Pro Ser
 130 135 140
 Cys Gly Ser Glu Val Cys Val Val Met Tyr His Gln Pro Ser Ala Pro
 145 150 155 160
 Ala Gly Ile Gly Gly Pro Tyr Met Phe Gln Trp Asn Asp Asp Arg Cys
 165 170 175
 Asn Met Lys Asn Asn Phe Ile Cys Lys Tyr Ser Asp Glu Lys Pro Ala
 180 185 190
 Val Pro Ser Arg Glu Ala Glu Gly Glu Glu Thr Glu Leu Thr Thr Pro
 195 200 205
 Val Leu Pro Glu Glu Thr Gln Glu Glu Asp Ala Lys Lys Thr Phe Lys
 210 215 220
 Glu Ser Arg Glu Ala Ala Leu Asn Leu Ala Tyr Ile Leu Ile Pro Ser
 225 230 235 240
 Ile Pro Leu Leu Leu Leu Leu Val Val Thr Thr Val Val Cys Trp Val
 245 250 255
 Trp Ile Cys Arg Lys Arg Lys Arg Glu Gln Pro Asp Pro Ser Thr Lys
 260 265 270
 Lys Gln His Thr Ile Trp Pro Ser Pro His Gln Gly Asn Ser Pro Asp
 275 280 285
 Leu Glu Val Tyr Asn Val Ile Arg Lys Gln Ser Glu Ala Asp Leu Ala
 290 295 300
 Glu Thr Arg Pro Asp Leu Lys Asn Ile Ser Phe Arg Val Cys Ser Gly
 305 310 315 320
 Glu Ala Thr Pro Asp Asp Met Ser Cys Asp Tyr Asp Asn Met Ala Val
 325 330 335
 Asn Pro Ser Glu Ser Gly Phe Val Thr Leu Val Ser Val Glu Ser Gly
 340 345 350
 Phe Val Thr Asn Asp Ile Tyr Glu Phe Ser Pro Asp Gln Met Gly Arg
 355 360 365
 Ser Lys Glu Ser Gly Trp Val Glu Asn Glu Ile Tyr Gly Tyr
 370 375 380

<211> 50
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 138

gttcattgaa aacctcttgc catctgatgg tgacttctgg attgggctca 50

<210> 139

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 139

aagccaaaga agcctgcagg aggg 24

<210> 140

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 140

cagtccaagc ataaagggtcc tggc 24

<210> 141

<211> 1514

<212> DNA

<213> Homo sapiens

<400> 141

ggggtctccc tcagggccgg gaggcacagc ggtccctgct tgctgaaggg ctggatgtac 60
 gcatccgcag gttcccgcgg acttgggggc gcccgctgag ccccggcgcc cgcagaagac 120
 ttgtgtttgc ctctgcagc ctcaaccgcg agggcagcga gggcctacca ccatgatcac 180
 tgggtgtgttc agcatgcgct tgtggacccc agtgggcgct ctgacctcgc tggcgactcg 240
 cctgcaccag cggcgggtgg ccctggccga gctgcaggag gccgatggcc agtgtccggt 300
 cgaccgcagc ctgctgaagt tgaaaatggt gcaggctcgtg tttcgacacg gggctcggag 360
 tcctctcaag ccgctcccgc tggaggagca ggtagagtgg aacccccagc tattagaggt 420
 cccaccccaa actcagtttg attacacagt caccaatcta gctggtggtc cgaaaccata 480
 ttctccttac gactctcaat accatgagac caccctgaag gggggcatgt ttgctgggca 540
 gctgaccaag gtgggcatgc agcaaattgt tgccttggga gagagactga ggaagaacta 600
 tgtggaagac attccctttc tttcaccaac cttcaaccca caggaggtct ttattcggtc 660
 cactaacatt tttcggaatc tggagtcac ccgttggttg ctggctgggc ttttccagt 720

```

tcagaaagaa ggacccatca tcatccacac tgatgaagca gattcagaag tcttgatcc 780
caactaccaa agctgctgga gcctgaggca gagaaccaga ggccggaggc agactgcctc 840
tttacagcca ggaatctcag aggatttgaa aaaggtgaag gacaggatgg gcattgacag 900
tagtgataaa gtggacttct tcatcctcct ggacaacgtg gctgccgagc aggcacacaa 960
cctcccaagc tgcccatgc tgaagagatt tgcacggatg atcgaacaga gagctgtgga 1020
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caagatcaga aagctgtatc tctatgcggc tcatgatgtg accttcatac cgctcttaat 1200
gaccctgggg atttttgacc acaaatggcc accgtttgct gttgacctga ccatggaact 1260
ttaccagcac ctggaatcta aggagtgggt tgtgcagctc tattaccacg ggaaggagca 1320
ggtgccgaga ggttgccctg atgggctctg cccgctggac atgttcttga atgccatgtc 1380
agtttatacc ttaagcccag aaaaatacca tgcactctgc tctcaaactc aggtgatgga 1440
agttggaaat gaagagtaac tgatttataa aagcaggatg tgttgatttt aaaataaagt 1500
gcctttatac aatg 1514

```

<210> 142

<211> 428

<212> PRT

<213> Homo sapiens

<400> 142

```

Met Ile Thr Gly Val Phe Ser Met Arg Leu Trp Thr Pro Val Gly Val
  1             5             10             15

```

```

Leu Thr Ser Leu Ala Tyr Cys Leu His Gln Arg Arg Val Ala Leu Ala
      20             25             30

```

```

Glu Leu Gln Glu Ala Asp Gly Gln Cys Pro Val Asp Arg Ser Leu Leu
      35             40             45

```

```

Lys Leu Lys Met Val Gln Val Val Phe Arg His Gly Ala Arg Ser Pro
      50             55             60

```

```

Leu Lys Pro Leu Pro Leu Glu Glu Gln Val Glu Trp Asn Pro Gln Leu
      65             70             75             80

```

```

Leu Glu Val Pro Pro Gln Thr Gln Phe Asp Tyr Thr Val Thr Asn Leu
      85             90             95

```

```

Ala Gly Gly Pro Lys Pro Tyr Ser Pro Tyr Asp Ser Gln Tyr His Glu
      100            105            110

```

```

Thr Thr Leu Lys Gly Gly Met Phe Ala Gly Gln Leu Thr Lys Val Gly
      115            120            125

```

```

Met Gln Gln Met Phe Ala Leu Gly Glu Arg Leu Arg Lys Asn Tyr Val
      130            135            140

```

```

Glu Asp Ile Pro Phe Leu Ser Pro Thr Phe Asn Pro Gln Glu Val Phe
      145            150            155            160

```

```

Ile Arg Ser Thr Asn Ile Phe Arg Asn Leu Glu Ser Thr Arg Cys Leu
      165            170            175

```

Leu Ala Gly Leu Phe Gln Cys Gln Lys Glu Gly Pro Ile Ile Ile His
 180 185 190
 Thr Asp Glu Ala Asp Ser Glu Val Leu Tyr Pro Asn Tyr Gln Ser Cys
 195 200 205
 Trp Ser Leu Arg Gln Arg Thr Arg Gly Arg Arg Gln Thr Ala Ser Leu
 210 215 220
 Gln Pro Gly Ile Ser Glu Asp Leu Lys Lys Val Lys Asp Arg Met Gly
 225 230 235 240
 Ile Asp Ser Ser Asp Lys Val Asp Phe Phe Ile Leu Leu Asp Asn Val
 245 250 255
 Ala Ala Glu Gln Ala His Asn Leu Pro Ser Cys Pro Met Leu Lys Arg
 260 265 270
 Phe Ala Arg Met Ile Glu Gln Arg Ala Val Asp Thr Ser Leu Tyr Ile
 275 280 285
 Leu Pro Lys Glu Asp Arg Glu Ser Leu Gln Met Ala Val Gly Pro Phe
 290 295 300
 Leu His Ile Leu Glu Ser Asn Leu Leu Lys Ala Met Asp Ser Ala Thr
 305 310 315 320
 Ala Pro Asp Lys Ile Arg Lys Leu Tyr Leu Tyr Ala Ala His Asp Val
 325 330 335
 Thr Phe Ile Pro Leu Leu Met Thr Leu Gly Ile Phe Asp His Lys Trp
 340 345 350
 Pro Pro Phe Ala Val Asp Leu Thr Met Glu Leu Tyr Gln His Leu Glu
 355 360 365
 Ser Lys Glu Trp Phe Val Gln Leu Tyr Tyr His Gly Lys Glu Gln Val
 370 375 380
 Pro Arg Gly Cys Pro Asp Gly Leu Cys Pro Leu Asp Met Phe Leu Asn
 385 390 395 400
 Ala Met Ser Val Tyr Thr Leu Ser Pro Glu Lys Tyr His Ala Leu Cys
 405 410 415
 Ser Gln Thr Gln Val Met Glu Val Gly Asn Glu Glu
 420 425

<210> 143

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 143

ccaactacca aagctgctgg agcc

24

<210> 144

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 144

gcagctctat taccacggga agga

24

<210> 145

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 145

tccttcccgt ggtaatagag ctgc

24

<210> 146

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 146

ggcagagaac cagaggccgg aggagactgc ctctttacag ccagg

45

<210> 147

<211> 1686

<212> DNA

<213> Homo sapiens

<400> 147

ctcctcttaa catacttgca gctaaaacta aatattgctg cttggggacc tccttctagc 60
cttaaatttc agctcatcac cttcacctgc cttgggcatg gctctgctat tctccttgat 120
ccttgccatt tgcaccagac ctggattcct agcgtctcca tctggagtgc ggctggtggg 180

```

gggcctccac cgctgtgaag ggcgggtgga ggtggaacag aaaggccagt ggggcaccgt 240
gtgtgatgac ggctgggaca ttaaggacgt ggctgtgttg tgccgggagc tgggctgtgg 300
agctgccagc ggaacccta gtggtatatt gtatgagcca ccagcagaaa aagagcaaaa 360
ggcctcatc caatcagtc gttgcacagg aacagaagat acattggctc agtgtgagca 420
agaagaagtt tatgattgtt cacatgatga agatgctggg gcatcgtgtg agaaccaga 480
gagctctttc tccccagtc cagagggtgt caggctggct gacggccctg ggcattgcaa 540
gggacgcgtg gaagtgaagc accagaacca gtggtatacc gtgtgccaga caggctggag 600
cctccgggcc gcaaagggtg tgtgccggca gctgggatgt gggagggtg tactgactca 660
aaaacgctgc aacaagcatg cctatggccg aaaacccatc tggctgagcc agatgtcatg 720
ctcaggacga gaagcaacc ttcaggattg cccttctggg ccttggggga agaacacctg 780
caaccatgat gaagacacgt gggtcgaatg tgaagatccc tttgacttga gactagtagg 840
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tgtttctctg aagaactctg acaaaataca gattttggta ctgaaagaga ttctagagga 1560
acggaatttt aaggataaat tttctgaatt gggtatgggg tttctgaaat tggctctata 1620
atctaattag atataaaatt ctggtaactt tatttacaat aataaagata gcactatgtg 1680
ttcaaa 1686

```

<210> 148

<211> 347

<212> PRT

<213> Homo sapiens

<400> 148

Met Ala Leu Leu Phe Ser Leu Ile Leu Ala Ile Cys Thr Arg Pro Gly
1 5 10 15

Phe Leu Ala Ser Pro Ser Gly Val Arg Leu Val Gly Gly Leu His Arg
20 25 30

Cys Glu Gly Arg Val Glu Val Glu Gln Lys Gly Gln Trp Gly Thr Val
35 40 45

Cys Asp Asp Gly Trp Asp Ile Lys Asp Val Ala Val Leu Cys Arg Glu
50 55 60

Leu Gly Cys Gly Ala Ala Ser Gly Thr Pro Ser Gly Ile Leu Tyr Glu
65 70 75 80

Pro Pro Ala Glu Lys Glu Gln Lys Val Leu Ile Gln Ser Val Ser Cys
85 90 95

Thr Gly Thr Glu Asp Thr Leu Ala Gln Cys Glu Gln Glu Glu Val Tyr
100 105 110

Asp Cys Ser His Asp Glu Asp Ala Gly Ala Ser Cys Glu Asn Pro Glu
 115 120 125
 Ser Ser Phe Ser Pro Val Pro Glu Gly Val Arg Leu Ala Asp Gly Pro
 130 135 140
 Gly His Cys Lys Gly Arg Val Glu Val Lys His Gln Asn Gln Trp Tyr
 145 150 155 160
 Thr Val Cys Gln Thr Gly Trp Ser Leu Arg Ala Ala Lys Val Val Cys
 165 170 175
 Arg Gln Leu Gly Cys Gly Arg Ala Val Leu Thr Gln Lys Arg Cys Asn
 180 185 190
 Lys His Ala Tyr Gly Arg Lys Pro Ile Trp Leu Ser Gln Met Ser Cys
 195 200 205
 Ser Gly Arg Glu Ala Thr Leu Gln Asp Cys Pro Ser Gly Pro Trp Gly
 210 215 220
 Lys Asn Thr Cys Asn His Asp Glu Asp Thr Trp Val Glu Cys Glu Asp
 225 230 235 240
 Pro Phe Asp Leu Arg Leu Val Gly Gly Asp Asn Leu Cys Ser Gly Arg
 245 250 255
 Leu Glu Val Leu His Lys Gly Val Trp Gly Ser Val Cys Asp Asp Asn
 260 265 270
 Trp Gly Glu Lys Glu Asp Gln Val Val Cys Lys Gln Leu Gly Cys Gly
 275 280 285
 Lys Ser Leu Ser Pro Ser Phe Arg Asp Arg Lys Cys Tyr Gly Pro Gly
 290 295 300
 Val Gly Arg Ile Trp Leu Asp Asn Val Arg Cys Ser Gly Glu Glu Gln
 305 310 315 320
 Ser Leu Glu Gln Cys Gln His Arg Phe Trp Gly Phe His Asp Cys Thr
 325 330 335
 His Gln Glu Asp Val Ala Val Ile Cys Ser Val
 340 345

<210> 149

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

oligonucleotide probe

<400> 149

ttcagctcat caccttcacc tgcc

24

<210> 150

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 150

ggctcataca aaataccact aggg

24

<210> 151

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 151

gggcctccac cgctgtgaag ggcgggtgga ggtggaacag aaaggccagt

50

<210> 152

<211> 1427

<212> DNA

<213> Homo sapiens

<400> 152

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actgcactcg gttctatcga ttgaattccc cggggatcct ctagagatcc ctcgacctcg 60
accacgcgt ccgcggacgc gtgggcggac gcgtgggccc gctaccagga agagtctgcc 120
gaagggtgaag gccatggact tcatcacctc cacagccatc ctgcccctgc tgttcgggtg 180
cctgggcgtc ttcggcctct tccggtgct gcagtgggtg cgcgggaagg cctacctgcg 240
gaatgctgtg gtggtgatca caggcgccac ctcagggtcg ggcaaagaat gtgcaaaagt 300
cttctatgct gcggtgcta aactggtgct ctgtggcccg aatggtgggg ccctagaaga 360
gctcatcaga gaacttaccg cttctcatgc caccaagggtg cagacacaca agccttactt 420
ggtgaccttc gacctcacag actctggggc catagttgca gcagcagctg agatcctgca 480
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catggcctcc agggccagaa aagagcggaa atccaagaac tcctagtact ctgaccagcc 1080

```

```

agggccaggg cagagaagca gcactcttag gcttgcttac tctacaaggg acagttgcat 1140
ttgttgagac tttaatggag atttgtctca caagtgggaa agactgaaga aacacatctc 1200
gtgcagatct gctggcagag gacaatcaaa aacgacaaca agcttcttcc caggggtgagg 1260
ggaaacactt aaggaataaaa tatggagctg gggtttaaca ctaaaaacta gaaataaaca 1320
tctcaaacag taaaaaaaaa aaaaaagggc ggccgcgact ctagagtcga cctgcagaag 1380
cttggccgcc atggcccaac ttgtttattg cagcttataa tggttac 1427

```

<210> 153

<211> 310

<212> PRT

<213> Homo sapiens

<400> 153

```

Met Asp Phe Ile Thr Ser Thr Ala Ile Leu Pro Leu Leu Phe Gly Cys
  1                      5                      10                      15

```

```

Leu Gly Val Phe Gly Leu Phe Arg Leu Leu Gln Trp Val Arg Gly Lys
          20                      25                      30

```

```

Ala Tyr Leu Arg Asn Ala Val Val Val Ile Thr Gly Ala Thr Ser Gly
          35                      40                      45

```

```

Leu Gly Lys Glu Cys Ala Lys Val Phe Tyr Ala Ala Gly Ala Lys Leu
          50                      55                      60

```

```

Val Leu Cys Gly Arg Asn Gly Gly Ala Leu Glu Glu Leu Ile Arg Glu
          65                      70                      75                      80

```

```

Leu Thr Ala Ser His Ala Thr Lys Val Gln Thr His Lys Pro Tyr Leu
          85                      90                      95

```

```

Val Thr Phe Asp Leu Thr Asp Ser Gly Ala Ile Val Ala Ala Ala Ala
          100                     105                     110

```

```

Glu Ile Leu Gln Cys Phe Gly Tyr Val Asp Ile Leu Val Asn Asn Ala
          115                     120                     125

```

```

Gly Ile Ser Tyr Arg Gly Thr Ile Met Asp Thr Thr Val Asp Val Asp
          130                     135                     140

```

```

Lys Arg Val Met Glu Thr Asn Tyr Phe Gly Pro Val Ala Leu Thr Lys
          145                     150                     155                     160

```

```

Ala Leu Leu Pro Ser Met Ile Lys Arg Arg Gln Gly His Ile Val Ala
          165                     170                     175

```

```

Ile Ser Ser Ile Gln Gly Lys Met Ser Ile Pro Phe Arg Ser Ala Tyr
          180                     185                     190

```

```

Ala Ala Ser Lys His Ala Thr Gln Ala Phe Phe Asp Cys Leu Arg Ala
          195                     200                     205

```

```

Glu Met Glu Gln Tyr Glu Ile Glu Val Thr Val Ile Ser Pro Gly Tyr

```

210 215 220
 Ile His Thr Asn Leu Ser Val Asn Ala Ile Thr Ala Asp Gly Ser Arg
 225 230 235 240
 Tyr Gly Val Met Asp Thr Thr Thr Ala Gln Gly Arg Ser Pro Val Glu
 245 250 255
 Val Ala Gln Asp Val Leu Ala Ala Val Gly Lys Lys Lys Lys Asp Val
 260 265 270
 Ile Leu Ala Asp Leu Leu Pro Ser Leu Ala Val Tyr Leu Arg Thr Leu
 275 280 285
 Ala Pro Gly Leu Phe Phe Ser Leu Met Ala Ser Arg Ala Arg Lys Glu
 290 295 300
 Arg Lys Ser Lys Asn Ser
 305 310

<210> 154

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 154

ggtgctaaac tgggtgctctg tggc

24

<210> 155

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 155

cagggcaaga tgagcattcc

20

<210> 156

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 156
tcataactgtt ccatctcggc acgc

24

<210> 157
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 157
aatggtgggg ccctagaaga gctcatcaga gaactcaccg cttctcatgc

50

<210> 158
<211> 1771
<212> DNA
<213> Homo sapiens

<400> 158
cccacgcgtc cgctgggtgtt agatcgagca accctctaaa agcagtttag agtgggtaaaa 60
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cctcctgctt ctcccgttac tgatcgtctg ctccctagag tccttcgtga agctttttat 180
tctaagagg agaaaatcag tcaccggcga aatcgtgctg attacaggag ctgggcatgg 240
aattgggaga ctgactgcct atgaatttgc taaacttaaa agcaagctgg ttctctggga 300
tataaataag catggactgg aggaaacagc tgccaaatgc aagggactgg gtgccaaggt 360
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1740
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a a 1771

<210> 159

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| <400> | 159 | | | | | | | | | | | | | | | |
| Met | Lys | Phe | Leu | Leu | Asp | Ile | Leu | Leu | Leu | Leu | Pro | Leu | Leu | Ile | Val | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Cys | Ser | Leu | Glu | Ser | Phe | Val | Lys | Leu | Phe | Ile | Pro | Lys | Arg | Arg | Lys | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Ser | Val | Thr | Gly | Glu | Ile | Val | Leu | Ile | Thr | Gly | Ala | Gly | His | Gly | Ile | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Gly | Arg | Leu | Thr | Ala | Tyr | Glu | Phe | Ala | Lys | Leu | Lys | Ser | Lys | Leu | Val | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Leu | Trp | Asp | Ile | Asn | Lys | His | Gly | Leu | Glu | Glu | Thr | Ala | Ala | Lys | Cys | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Lys | Gly | Leu | Gly | Ala | Lys | Val | His | Thr | Phe | Val | Val | Asp | Cys | Ser | Asn | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Arg | Glu | Asp | Ile | Tyr | Ser | Ser | Ala | Lys | Lys | Val | Lys | Ala | Glu | Ile | Gly | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Asp | Val | Ser | Ile | Leu | Val | Asn | Asn | Ala | Gly | Val | Val | Tyr | Thr | Ser | Asp | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Leu | Phe | Ala | Thr | Gln | Asp | Pro | Gln | Ile | Glu | Lys | Thr | Phe | Glu | Val | Asn | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Val | Leu | Ala | His | Phe | Trp | Thr | Thr | Lys | Ala | Phe | Leu | Pro | Ala | Met | Thr | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Lys | Asn | Asn | His | Gly | His | Ile | Val | Thr | Val | Ala | Ser | Ala | Ala | Gly | His | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Val | Ser | Val | Pro | Phe | Leu | Leu | Ala | Tyr | Cys | Ser | Ser | Lys | Phe | Ala | Ala | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Val | Gly | Phe | His | Lys | Thr | Leu | Thr | Asp | Glu | Leu | Ala | Ala | Leu | Gln | Ile | |
| | | 195 | | | | | 200 | | | | | 205 | | | | |
| Thr | Gly | Val | Lys | Thr | Thr | Cys | Leu | Cys | Pro | Asn | Phe | Val | Asn | Thr | Gly | |
| | 210 | | | | | 215 | | | | | 220 | | | | | |
| Phe | Ile | Lys | Asn | Pro | Ser | Thr | Ser | Leu | Gly | Pro | Thr | Leu | Glu | Pro | Glu | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | |
| Glu | Val | Val | Asn | Arg | Leu | Met | His | Gly | Ile | Leu | Thr | Glu | Gln | Lys | Met | |
| | | | | 245 | | | | | 250 | | | | | 255 | | |

Ile Phe Ile Pro Ser Ser Ile Ala Phe Leu Thr Thr Leu Glu Arg Ile
 260 265 270

Leu Pro Glu Arg Phe Leu Ala Val Leu Lys Arg Lys Ile Ser Val Lys
 275 280 285

Phe Asp Ala Val Ile Gly Tyr Lys Met Lys Ala Gln
 290 295 300

<210> 160

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 160

ggtgaaggca gaaattggag atg

23

<210> 161

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 161

atcccatgca tcagcctggt tacc

24

<210> 162

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 162

gctggtgtag tctatacatc agatttggtt gctacacaag atcctcag

48

<210> 163

<211> 2076

<212> DNA

<213> Homo sapiens

<400> 163

cccacgcgtc cgccgacgcg tgggtcgact agttctagat cgcgagcggc cgcccgcggc 60
 tcagggagga gcaccgactg cgccgcaccc tgagagatgg ttggtgccat gtggaagggtg 120

```

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gaaataaaaa tattatatat aaaagtaaaa aaaaaa 2076

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<210> 164

<211> 476

<212> PRT

<213> Homo sapiens

<400> 164

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Met Val Gly Ala Met Trp Lys Val Ile Val Ser Leu Val Leu Leu Met
  1             5             10             15

```

```

Pro Gly Pro Cys Asp Gly Leu Phe Arg Ser Leu Tyr Arg Ser Val Ser
      20             25             30

```

```

Met Pro Pro Lys Gly Asp Ser Gly Gln Pro Leu Phe Leu Thr Pro Tyr
      35             40             45

```

```

Ile Glu Ala Gly Lys Ile Gln Lys Gly Arg Glu Leu Ser Leu Val Gly
      50             55             60

```

```

Pro Phe Pro Gly Leu Asn Met Lys Ser Tyr Ala Gly Phe Leu Thr Val

```

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Asn | Lys | Thr | Tyr | Asn | Ser | Asn | Leu | Phe | Phe | Trp | Phe | Phe | Pro | Ala | Gln |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ile | Gln | Pro | Glu | Asp | Ala | Pro | Val | Val | Leu | Trp | Leu | Gln | Gly | Gly | Pro |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gly | Gly | Ser | Ser | Met | Phe | Gly | Leu | Phe | Val | Glu | His | Gly | Pro | Tyr | Val |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Val | Thr | Ser | Asn | Met | Thr | Leu | Arg | Asp | Arg | Asp | Phe | Pro | Trp | Thr | Thr |
| | 130 | | | | | | 135 | | | | | 140 | | | |
| Thr | Leu | Ser | Met | Leu | Tyr | Ile | Asp | Asn | Pro | Val | Gly | Thr | Gly | Phe | Ser |
| 145 | | | | | | 150 | | | | 155 | | | | | 160 |
| Phe | Thr | Asp | Asp | Thr | His | Gly | Tyr | Ala | Val | Asn | Glu | Asp | Asp | Val | Ala |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Arg | Asp | Leu | Tyr | Ser | Ala | Leu | Ile | Gln | Phe | Phe | Gln | Ile | Phe | Pro | Glu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Tyr | Lys | Asn | Asn | Asp | Phe | Tyr | Val | Thr | Gly | Glu | Ser | Tyr | Ala | Gly | Lys |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Tyr | Val | Pro | Ala | Ile | Ala | His | Leu | Ile | His | Ser | Leu | Asn | Pro | Val | Arg |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Glu | Val | Lys | Ile | Asn | Leu | Asn | Gly | Ile | Ala | Ile | Gly | Asp | Gly | Tyr | Ser |
| 225 | | | | | 230 | | | | 235 | | | | | | 240 |
| Asp | Pro | Glu | Ser | Ile | Ile | Gly | Gly | Tyr | Ala | Glu | Phe | Leu | Tyr | Gln | Ile |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Gly | Leu | Leu | Asp | Glu | Lys | Gln | Lys | Lys | Tyr | Phe | Gln | Lys | Gln | Cys | His |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Glu | Cys | Ile | Glu | His | Ile | Arg | Lys | Gln | Asn | Trp | Phe | Glu | Ala | Phe | Glu |
| | 275 | | | | | | 280 | | | | | 285 | | | |
| Ile | Leu | Asp | Lys | Leu | Leu | Asp | Gly | Asp | Leu | Thr | Ser | Asp | Pro | Ser | Tyr |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Phe | Gln | Asn | Val | Thr | Gly | Cys | Ser | Asn | Tyr | Tyr | Asn | Phe | Leu | Arg | Cys |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Thr | Glu | Pro | Glu | Asp | Gln | Leu | Tyr | Tyr | Val | Lys | Phe | Leu | Ser | Leu | Pro |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Glu | Val | Arg | Gln | Ala | Ile | His | Val | Gly | Asn | Gln | Thr | Phe | Asn | Asp | Gly |
| | | | 340 | | | | | 345 | | | | | 350 | | |

Thr Ile Val Glu Lys Tyr Leu Arg Glu Asp Thr Val Gln Ser Val Lys
 355 360 365

Pro Trp Leu Thr Glu Ile Met Asn Asn Tyr Lys Val Leu Ile Tyr Asn
 370 375 380

Gly Gln Leu Asp Ile Ile Val Ala Ala Ala Leu Thr Glu Arg Ser Leu
 385 390 395 400

Met Gly Met Asp Trp Lys Gly Ser Gln Glu Tyr Lys Lys Ala Glu Lys
 405 410 415

Lys Val Trp Lys Ile Phe Lys Ser Asp Ser Glu Val Ala Gly Tyr Ile
 420 425 430

Arg Gln Ala Gly Asp Phe His Gln Val Ile Ile Arg Gly Gly Gly His
 435 440 445

Ile Leu Pro Tyr Asp Gln Pro Leu Arg Ala Phe Asp Met Ile Asn Arg
 450 455 460

Phe Ile Tyr Gly Lys Gly Trp Asp Pro Tyr Val Gly
 465 470 475

<210> 165

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 165

ttccatgccca cctaagggag actc

24

<210> 166

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 166

tgcatgaggt gtgcaatggc tggc

24

<210> 167

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 167

agctctcaga ggctgggtcat aggg

24

<210> 168

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 168

gtcggccctt tcccaggact gaacatgaag agttatgccg gcttccctcac

50

<210> 169

<211> 2477

<212> DNA

<213> Homo sapiens

<400> 169

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 tcttgctgga gaagaaaggg ctgagggcag agcagggcac tctcactcag ggtgaccagc 180
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acatctgcaa aagcaaa 2477

```

```

<210> 170
<211> 552
<212> PRT
<213> Homo sapiens

```

```

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  1             5             10             15

Phe Trp Ser Asp His Ser Ala Leu Cys Phe Ala Glu Ser Cys Glu Gly
      20             25             30

Gln Pro Gly Lys Val Glu Gln Met Ser Thr His Arg Ser Arg Leu Leu
      35             40             45

Thr Ala Ala Pro Leu Ser Met Glu Gln Arg Gln Pro Trp Pro Arg Ala
      50             55             60

Leu Glu Val Asp Ser Arg Ser Val Val Leu Leu Ser Val Val Trp Val
      65             70             75             80

Leu Leu Ala Pro Pro Ala Ala Gly Met Pro Gln Phe Ser Thr Phe His
      85             90             95

Ser Glu Asn Arg Asp Trp Thr Phe Asn His Leu Thr Val His Gln Gly
      100            105            110

Thr Gly Ala Val Tyr Val Gly Ala Ile Asn Arg Val Tyr Lys Leu Thr
      115            120            125

Gly Asn Leu Thr Ile Gln Val Ala His Lys Thr Gly Pro Glu Glu Asp
      130            135            140

Asn Lys Ser Arg Tyr Pro Pro Leu Ile Val Gln Pro Cys Ser Glu Val
      145            150            155            160

Leu Thr Leu Thr Asn Asn Val Asn Lys Leu Leu Ile Ile Asp Tyr Ser
      165            170            175

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Glu Asn Arg Leu Leu Ala Cys Gly Ser Leu Tyr Gln Gly Val Cys Lys
 180 185 190
 Leu Leu Arg Leu Asp Asp Leu Phe Ile Leu Val Glu Pro Ser His Lys
 195 200 205
 Lys Glu His Tyr Leu Ser Ser Val Asn Lys Thr Gly Thr Met Tyr Gly
 210 215 220
 Val Ile Val Arg Ser Glu Gly Glu Asp Gly Lys Leu Phe Ile Gly Thr
 225 230 235 240
 Ala Val Asp Gly Lys Gln Asp Tyr Phe Pro Thr Leu Ser Ser Arg Lys
 245 250 255
 Leu Pro Arg Asp Pro Glu Ser Ser Ala Met Leu Asp Tyr Glu Leu His
 260 265 270
 Ser Asp Phe Val Ser Ser Leu Ile Lys Ile Pro Ser Asp Thr Leu Ala
 275 280 285
 Leu Val Ser His Phe Asp Ile Phe Tyr Ile Tyr Gly Phe Ala Ser Gly
 290 295 300
 Gly Phe Val Tyr Phe Leu Thr Val Gln Pro Glu Thr Pro Glu Gly Val
 305 310 315 320
 Ala Ile Asn Ser Ala Gly Asp Leu Phe Tyr Thr Ser Arg Ile Val Arg
 325 330 335
 Leu Cys Lys Asp Asp Pro Lys Phe His Ser Tyr Val Ser Leu Pro Phe
 340 345 350
 Gly Cys Thr Arg Ala Gly Val Glu Tyr Arg Leu Leu Gln Ala Ala Tyr
 355 360 365
 Leu Ala Lys Pro Gly Asp Ser Leu Ala Gln Ala Phe Asn Ile Thr Ser
 370 375 380
 Gln Asp Asp Val Leu Phe Ala Ile Phe Ser Lys Gly Gln Lys Gln Tyr
 385 390 395 400
 His His Pro Pro Asp Asp Ser Ala Leu Cys Ala Phe Pro Ile Arg Ala
 405 410 415
 Ile Asn Leu Gln Ile Lys Glu Arg Leu Gln Ser Cys Tyr Gln Gly Glu
 420 425 430
 Gly Asn Leu Glu Leu Asn Trp Leu Leu Gly Lys Asp Val Gln Cys Thr
 435 440 445
 Lys Ala Pro Val Pro Ile Asp Asp Asn Phe Cys Gly Leu Asp Ile Asn

| | | | | |
|---|-----|-----|-----|---------|
| 450 | | 455 | | 460 |
| Gln Pro Leu Gly Gly Ser Thr Pro Val Glu Gly Leu Thr Leu Tyr Thr | | | | |
| 465 | | 470 | | 475 480 |
| Thr Ser Arg Asp Arg Met Thr Ser Val Ala Ser Tyr Val Tyr Asn Gly | | | | |
| | 485 | | 490 | 495 |
| Tyr Ser Val Val Phe Val Gly Thr Lys Ser Gly Lys Leu Lys Lys Val | | | | |
| | 500 | | 505 | 510 |
| Arg Val Tyr Glu Phe Arg Cys Ser Asn Ala Ile His Leu Leu Ser Lys | | | | |
| | 515 | | 520 | 525 |
| Glu Ser Leu Leu Glu Gly Ser Tyr Trp Trp Arg Phe Asn Tyr Arg Gln | | | | |
| | 530 | | 535 | 540 |
| Leu Tyr Phe Leu Gly Glu Gln Arg | | | | |
| 545 | | 550 | | |

<210> 171

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 171

tggaataaccg cctcctgcag

20

<210> 172

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 172

cttctgccct ttggagaaga tggc

24

<210> 173

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 173
ggactcactg gccaggcct tcaatatcac cagccaggac gat

42

<210> 174
<211> 3106
<212> DNA
<213> Homo sapiens

<220>
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<223> a, t, c or g

<400> 174
aggctcccgc ggcgggctga gtgcggactg gagtgggaac ccgggtcccc gcgcttagag 60
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tgctggctcg cttgggcttc ctgggtgctc gcaggctgga ctggagcacc ctgggtccctc 180
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attccacctt ctggatcttc gggggctcca tccactatct ccgtgtgccc agggagtact 300
ggagggaccg cctgctgaag atgaaggcct gtggcttgaa caccctcacc acctatgttc 360
cgtggaacct gcatgagcca gaaagaggca aatttgactt ctctgggaac ctggacctgg 420
aggccttcgt cctgatggcc gcagagatcg ggctgtgggt gattctgcgt ccaggccccct 480
acatctgcag tgagatggac ctccggggct tgcccagctg gctactccaa gacctggca 540
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tgatgtccag ggtgggtgcca ctccagtaca agcgtggggg acctatcatt gccgtgcagg 660
tgagagaatga atatggttcc tataataaag accccgcata catgccctac gtcaagaagg 720
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cagaaaaagt gctgaaacgt gcccttgcac cggacgtcac agccctgcga gcattctgtg 2340
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<210> 175

<211> 636

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (539)

<223> Any amino acid

<400> 175

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Leu Leu Leu Val Val Leu Gly Phe Leu Val Leu Arg Arg Leu Asp Trp
      20              25              30

Ser Thr Leu Val Pro Leu Arg Leu Arg His Arg Gln Leu Gly Leu Gln
      35              40              45

Ala Lys Gly Trp Asn Phe Met Leu Glu Asp Ser Thr Phe Trp Ile Phe
      50              55              60

Gly Gly Ser Ile His Tyr Phe Arg Val Pro Arg Glu Tyr Trp Arg Asp
      65              70              75              80

Arg Leu Leu Lys Met Lys Ala Cys Gly Leu Asn Thr Leu Thr Thr Tyr
      85              90              95

Val Pro Trp Asn Leu His Glu Pro Glu Arg Gly Lys Phe Asp Phe Ser
      100             105             110

Gly Asn Leu Asp Leu Glu Ala Phe Val Leu Met Ala Ala Glu Ile Gly
      115             120             125

Leu Trp Val Ile Leu Arg Pro Gly Pro Tyr Ile Cys Ser Glu Met Asp
      130             135             140

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 145 150 155 160
 Arg Thr Thr Tyr Lys Gly Phe Thr Glu Ala Val Asp Leu Tyr Phe Asp
 165 170 175
 His Leu Met Ser Arg Val Val Pro Leu Gln Tyr Lys Arg Gly Gly Pro
 180 185 190
 Ile Ile Ala Val Gln Val Glu Asn Glu Tyr Gly Ser Tyr Asn Lys Asp
 195 200 205
 Pro Ala Tyr Met Pro Tyr Val Lys Lys Ala Leu Glu Asp Arg Gly Ile
 210 215 220
 Val Glu Leu Leu Leu Thr Ser Asp Asn Lys Asp Gly Leu Ser Lys Gly
 225 230 235 240
 Ile Val Gln Gly Val Leu Ala Thr Ile Asn Leu Gln Ser Thr His Glu
 245 250 255
 Leu Gln Leu Leu Thr Thr Phe Leu Phe Asn Val Gln Gly Thr Gln Pro
 260 265 270
 Lys Met Val Met Glu Tyr Trp Thr Gly Trp Phe Asp Ser Trp Gly Gly
 275 280 285
 Pro His Asn Ile Leu Asp Ser Ser Glu Val Leu Lys Thr Val Ser Ala
 290 295 300
 Ile Val Asp Ala Gly Ser Ser Ile Asn Leu Tyr Met Phe His Gly Gly
 305 310 315 320
 Thr Asn Phe Gly Phe Met Asn Gly Ala Met His Phe His Asp Tyr Lys
 325 330 335
 Ser Asp Val Thr Ser Tyr Asp Tyr Asp Ala Val Leu Thr Glu Ala Gly
 340 345 350
 Asp Tyr Thr Ala Lys Tyr Met Lys Leu Arg Asp Phe Phe Gly Ser Ile
 355 360 365
 Ser Gly Ile Pro Leu Pro Pro Pro Pro Asp Leu Leu Pro Lys Met Pro
 370 375 380
 Tyr Glu Pro Leu Thr Pro Val Leu Tyr Leu Ser Leu Trp Asp Ala Leu
 385 390 395 400
 Lys Tyr Leu Gly Glu Pro Ile Lys Ser Glu Lys Pro Ile Asn Met Glu
 405 410 415
 Asn Leu Pro Val Asn Gly Gly Asn Gly Gln Ser Phe Gly Tyr Ile Leu
 420 425 430

Tyr Glu Thr Ser Ile Thr Ser Ser Gly Ile Leu Ser Gly His Val His
435 440 445

Asp Arg Gly Gln Val Phe Val Asn Thr Val Ser Ile Gly Phe Leu Asp
450 455 460

Tyr Lys Thr Thr Lys Ile Ala Val Pro Leu Ile Gln Gly Tyr Thr Val
465 470 475 480

Leu Arg Ile Leu Val Glu Asn Arg Gly Arg Val Asn Tyr Gly Glu Asn
485 490 495

Ile Asp Asp Gln Arg Lys Gly Leu Ile Gly Asn Leu Tyr Leu Asn Asp
500 505 510

Ser Pro Leu Lys Asn Phe Arg Ile Tyr Ser Leu Asp Met Lys Lys Ser
515 520 525

Phe Phe Gln Arg Phe Gly Leu Asp Lys Trp Xaa Ser Leu Pro Glu Thr
530 535 540

Pro Thr Leu Pro Ala Phe Phe Leu Gly Ser Leu Ser Ile Ser Ser Thr
545 550 555 560

Pro Cys Asp Thr Phe Leu Lys Leu Glu Gly Trp Glu Lys Gly Val Val
565 570 575

Phe Ile Asn Gly Gln Asn Leu Gly Arg Tyr Trp Asn Ile Gly Pro Gln
580 585 590

Lys Thr Leu Tyr Leu Pro Gly Pro Trp Leu Ser Ser Gly Ile Asn Gln
595 600 605

Val Ile Val Phe Glu Glu Thr Met Ala Gly Pro Ala Leu Gln Phe Thr
610 615 620

Glu Thr Pro His Leu Gly Arg Asn Gln Tyr Ile Lys
625 630 635

<210> 176

<211> 2505

<212> DNA

<213> Homo sapiens

<400> 176

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ccctggtgag ggttctctac ttggccttcg gtgggggtca agacgcaggc acctacgcca 120
aaggggagca aagccgggct cggcccaggc cccccaggac ctccatctcc caatgttga 180
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tgcctttgggc cgaccggcctt ttgaagatgc gatggagcgg cctcaacgcc atacagtttt 480
 atgtgccctg gaactaccac gagccacagc ctgggggtcta taactttaat ggcagccggg 540
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<210> 177

<211> 654

<212> PRT

<213> Homo sapiens

<400> 177

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Asp Arg Gly His Asp Arg Phe Leu Leu Asp Gly Ala Pro Phe Arg Tyr
 35 40 45

Val Ser Gly Ser Leu His Tyr Phe Arg Val Pro Arg Val Leu Trp Ala
 50 55 60

Asp Arg Leu Leu Lys Met Arg Trp Ser Gly Leu Asn Ala Ile Gln Phe
 65 70 75 80
 Tyr Val Pro Trp Asn Tyr His Glu Pro Gln Pro Gly Val Tyr Asn Phe
 85 90 95
 Asn Gly Ser Arg Asp Leu Ile Ala Phe Leu Asn Glu Ala Ala Leu Ala
 100 105 110
 Asn Leu Leu Val Ile Leu Arg Pro Gly Pro Tyr Ile Cys Ala Glu Trp
 115 120 125
 Glu Met Gly Gly Leu Pro Ser Trp Leu Leu Arg Lys Pro Glu Ile His
 130 135 140
 Leu Arg Thr Ser Asp Pro Asp Phe Leu Ala Ala Val Asp Ser Trp Phe
 145 150 155 160
 Lys Val Leu Leu Pro Lys Ile Tyr Pro Trp Leu Tyr His Asn Gly Gly
 165 170 175
 Asn Ile Ile Ser Ile Gln Val Glu Asn Glu Tyr Gly Ser Tyr Arg Ala
 180 185 190
 Cys Asp Phe Ser Tyr Met Arg His Leu Ala Gly Leu Phe Arg Ala Leu
 195 200 205
 Leu Gly Glu Lys Ile Leu Leu Phe Thr Thr Asp Gly Pro Glu Gly Leu
 210 215 220
 Lys Cys Gly Ser Leu Arg Gly Leu Tyr Thr Thr Val Asp Phe Gly Pro
 225 230 235 240
 Ala Asp Asn Met Thr Lys Ile Phe Thr Leu Leu Arg Lys Tyr Glu Pro
 245 250 255
 His Gly Pro Leu Val Asn Ser Glu Tyr Tyr Thr Gly Trp Leu Asp Tyr
 260 265 270
 Trp Gly Gln Asn His Ser Thr Arg Ser Val Ser Ala Val Thr Lys Gly
 275 280 285
 Leu Glu Asn Met Leu Lys Leu Gly Ala Ser Val Asn Met Tyr Met Phe
 290 295 300
 His Gly Gly Thr Asn Phe Gly Tyr Trp Asn Gly Ala Asp Lys Lys Gly
 305 310 315 320
 Arg Phe Leu Pro Ile Thr Thr Ser Tyr Asp Tyr Asp Ala Pro Ile Ser
 325 330 335
 Glu Ala Gly Asp Pro Thr Pro Lys Leu Phe Ala Leu Arg Asp Val Ile

[illegible]

Asn Ser Thr Ser Thr Leu His Arg Thr His Ile Asn Ser Leu Ser Ala
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Asp Thr Leu Ser Ala Ser Glu Pro Met Glu Leu Ser Gly His
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<210> 178

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 178

tggctactcc aagaccctgg catg

24

<210> 179

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 179

tggacaaatc cccttgctca gccc

24

<210> 180

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 180

gggcttcacc gaagcagtg acctttatatt tgaccacctg atgtccaggg

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<210> 181

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 181

ccagctatga ctatgatgca cc

22

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<210> 182

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 182

tggcaccag aatggtgtg gctc

24

<210> 183

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 183

cgagatgtca tcagcaagtt ccaggaagtt cctttgggac ctttacctcc

50

<210> 184

<211> 1947

<212> DNA

<213> Homo sapiens

<400> 184

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gtgtttatgg ctttatctgc ctctacactc tcttctggtt attcaggata cctttgaagg 180
aatattcttt cgaaaaagtc agagaagaga gcagttttag tgacattcca gatgtcaaaa 240
acgattttgc gttccttctt cacatggtag accagtatga ccagctatat tccaagcgtt 300
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agtggacatt tgaaaaactc aggcagcaca tttcacgcaa cgcccaggac aagcaggagt 420
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tgcagcattt gcatatcact ggaacaaaag tggacattct gccaaaacaa ttgttttaaa 1320

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<210> 185
<211> 501
<212> PRT
<213> Homo sapiens
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Cys Val Tyr Gly Phe Ile Cys Leu Tyr Thr Leu Phe Trp Leu Phe Arg
20 25 30

Ile Pro Leu Lys Glu Tyr Ser Phe Glu Lys Val Arg Glu Glu Ser Ser
35 40 45

Phe Ser Asp Ile Pro Asp Val Lys Asn Asp Phe Ala Phe Leu Leu His
50 55 60

Met Val Asp Gln Tyr Asp Gln Leu Tyr Ser Lys Arg Phe Gly Val Phe
65 70 75 80

Leu Ser Glu Val Ser Glu Asn Lys Leu Arg Glu Ile Ser Leu Asn His
85 90 95

Glu Trp Thr Phe Glu Lys Leu Arg Gln His Ile Ser Arg Asn Ala Gln
100 105 110

Asp Lys Gln Glu Leu His Leu Phe Met Leu Ser Gly Val Pro Asp Ala
115 120 125

Val Phe Asp Leu Thr Asp Leu Asp Val Leu Lys Leu Glu Leu Ile Pro
130 135 140

Glu Ala Lys Ile Pro Ala Lys Ile Ser Gln Met Thr Asn Leu Gln Glu
145 150 155 160

Leu His Leu Cys His Cys Pro Ala Lys Val Glu Gln Thr Ala Phe Ser
165 170 175

Phe Leu Arg Asp His Leu Arg Cys Leu His Val Lys Phe Thr Asp Val
180 185 190

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
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| 195 | | | | | | 200 | | | | | | 205 | | | |
| Tyr | Leu | Ile | Gly | Asn | Leu | Asn | Ser | Glu | Asn | Asn | Lys | Met | Ile | Gly | Leu |
| 210 | | | | | | 215 | | | | | | 220 | | | |
| Glu | Ser | Leu | Arg | Glu | Leu | Arg | His | Leu | Lys | Ile | Leu | His | Val | Lys | Ser |
| 225 | | | | | | 230 | | | | | | 240 | | | |
| Asn | Leu | Thr | Lys | Val | Pro | Ser | Asn | Ile | Thr | Asp | Val | Ala | Pro | His | Leu |
| | | | 245 | | | | | | 250 | | | 255 | | | |
| Thr | Lys | Leu | Val | Ile | His | Asn | Asp | Gly | Thr | Lys | Leu | Leu | Val | Leu | Asn |
| | | | 260 | | | | | | 265 | | | 270 | | | |
| Ser | Leu | Lys | Lys | Met | Met | Asn | Val | Ala | Glu | Leu | Glu | Leu | Gln | Asn | Cys |
| 275 | | | | | | 280 | | | | | | 285 | | | |
| Glu | Leu | Glu | Arg | Ile | Pro | His | Ala | Ile | Phe | Ser | Leu | Ser | Asn | Leu | Gln |
| 290 | | | | | | 295 | | | | | | 300 | | | |
| Glu | Leu | Asp | Leu | Lys | Ser | Asn | Asn | Ile | Arg | Thr | Ile | Glu | Glu | Ile | Ile |
| 305 | | | | | | 310 | | | | | | 315 | | | |
| Ser | Phe | Gln | His | Leu | Lys | Arg | Leu | Thr | Cys | Leu | Lys | Leu | Trp | His | Asn |
| | | | 325 | | | | | | 330 | | | 335 | | | |
| Lys | Ile | Val | Thr | Ile | Pro | Pro | Ser | Ile | Thr | His | Val | Lys | Asn | Leu | Glu |
| | | | 340 | | | | | | 345 | | | 350 | | | |
| Ser | Leu | Tyr | Phe | Ser | Asn | Asn | Lys | Leu | Glu | Ser | Leu | Pro | Val | Ala | Val |
| 355 | | | | | | 360 | | | | | | 365 | | | |
| Phe | Ser | Leu | Gln | Lys | Leu | Arg | Cys | Leu | Asp | Val | Ser | Tyr | Asn | Asn | Ile |
| 370 | | | | | | 375 | | | | | | 380 | | | |
| Ser | Met | Ile | Pro | Ile | Glu | Ile | Gly | Leu | Leu | Gln | Asn | Leu | Gln | His | Leu |
| 385 | | | | | | 390 | | | | | | 395 | | | |
| His | Ile | Thr | Gly | Asn | Lys | Val | Asp | Ile | Leu | Pro | Lys | Gln | Leu | Phe | Lys |
| | | | 405 | | | | | | 410 | | | 415 | | | |
| Cys | Ile | Lys | Leu | Arg | Thr | Leu | Asn | Leu | Gly | Gln | Asn | Cys | Ile | Thr | Ser |
| | | | 420 | | | | | | 425 | | | 430 | | | |
| Leu | Pro | Glu | Lys | Val | Gly | Gln | Leu | Ser | Gln | Leu | Thr | Gln | Leu | Glu | Leu |
| 435 | | | | | | 440 | | | | | | 445 | | | |
| Lys | Gly | Asn | Cys | Leu | Asp | Arg | Leu | Pro | Ala | Gln | Leu | Gly | Gln | Cys | Arg |
| 450 | | | | | | 455 | | | | | | 460 | | | |
| Met | Leu | Lys | Lys | Ser | Gly | Leu | Val | Val | Glu | Asp | His | Leu | Phe | Asp | Thr |

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 Phe Ala Asn Gly Ile
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
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<400> 186
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<210> 187
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
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<210> 188
 <211> 47
 <212> DNA
 <213> Artificial Sequence

<220>
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 <213> Homo sapiens

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 aagacatttg tgttttacac acataaggat ctgtggttg gggtttctct tcctcccctg 180

465 470 475 480 485 490 495 500

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<210> 190

<211> 607

<212> PRT

<213> Homo sapiens

<400> 190

| | | | | | | | | | | | | | | | |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met
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| 5 | | | | 10 | | | | 15 | | | | | | | |
| Cys | Leu | Ala | Glu | Leu | Thr | Met | Ala | Glu | Ala | Glu | Gly | Asn | Ala | Ser | Cys |
| 20 | | | | 25 | | | | 30 | | | | | | | |
| Thr | Val | Ser | Leu | Gly | Gly | Ala | Asn | Met | Ala | Glu | Thr | His | Lys | Ala | Met |
| 35 | | | | 40 | | | | 45 | | | | | | | |
| Ile | Leu | Gln | Leu | Asn | Pro | Ser | Glu | Asn | Cys | Thr | Trp | Thr | Ile | Glu | Arg |
| 50 | | | | 55 | | | | 60 | | | | | | | |
| Pro | Glu | Asn | Lys | Ser | Ile | Arg | Ile | Ile | Phe | Ser | Tyr | Val | Gln | Leu | Asp |
| 65 | | | | 70 | | | | 75 | | | | 80 | | | |
| Pro | Asp | Gly | Ser | Cys | Glu | Ser | Glu | Asn | Ile | Lys | Val | Phe | Asp | Gly | Thr |
| 85 | | | | 90 | | | | 95 | | | | | | | |
| Ser | Ser | Asn | Gly | Pro | Leu | Leu | Gly | Gln | Val | Cys | Ser | Lys | Asn | Asp | Tyr |
| 100 | | | | 105 | | | | 110 | | | | | | | |
| Val | Pro | Val | Phe | Glu | Ser | Ser | Ser | Ser | Thr | Leu | Thr | Phe | Gln | Ile | Val |
| 115 | | | | 120 | | | | 125 | | | | | | | |
| Thr | Asp | Ser | Ala | Arg | Ile | Gln | Arg | Thr | Val | Phe | Val | Phe | Tyr | Tyr | Phe |
| 130 | | | | 135 | | | | 140 | | | | | | | |
| Phe | Ser | Pro | Asn | Ile | Ser | Ile | Pro | Asn | Cys | Gly | Gly | Tyr | Leu | Asp | Thr |
| 145 | | | | 150 | | | | 155 | | | | 160 | | | |
| Leu | Glu | Gly | Ser | Phe | Thr | Ser | Pro | Asn | Tyr | Pro | Lys | Pro | His | Pro | Glu |
| 165 | | | | 170 | | | | 175 | | | | | | | |
| Leu | Ala | Tyr | Cys | Val | Trp | His | Ile | Gln | Val | Glu | Lys | Asp | Tyr | Lys | Ile |
| 180 | | | | 185 | | | | 190 | | | | | | | |
| Lys | Leu | Asn | Phe | Lys | Glu | Ile | Phe | Leu | Glu | Ile | Asp | Lys | Gln | Cys | Lys |
| 195 | | | | 200 | | | | 205 | | | | | | | |
| Phe | Asp | Phe | Leu | Ala | Ile | Tyr | Asp | Gly | Pro | Ser | Thr | Asn | Ser | Gly | Leu |
| 210 | | | | 215 | | | | 220 | | | | | | | |
| Ile | Gly | Gln | Val | Cys | Gly | Arg | Val | Thr | Pro | Thr | Phe | Glu | Ser | Ser | Ser |
| 225 | | | | 230 | | | | 235 | | | | 240 | | | |
| Asn | Ser | Leu | Thr | Val | Val | Leu | Ser | Thr | Asp | Tyr | Ala | Asn | Ser | Tyr | Arg |
| 245 | | | | 250 | | | | 255 | | | | | | | |
| Gly | Phe | Ser | Ala | Ser | Tyr | Thr | Ser | Ile | Tyr | Ala | Glu | Asn | Ile | Asn | Thr |
| 260 | | | | 265 | | | | 270 | | | | | | | |
| Thr | Ser | Leu | Thr | Cys | Ser | Ser | Asp | Arg | Met | Arg | Val | Ile | Ile | Ser | Lys |
| 275 | | | | 280 | | | | 285 | | | | | | | |

Ser Tyr Leu Glu Ala Phe Asn Ser Asn Gly Asn Asn Leu Gln Leu Lys
 290 295 300
 Asp Pro Thr Cys Arg Pro Lys Leu Ser Asn Val Val Glu Phe Ser Val
 305 310 315 320
 Pro Leu Asn Gly Cys Gly Thr Ile Arg Lys Val Glu Asp Gln Ser Ile
 325 330 335
 Thr Tyr Thr Asn Ile Ile Thr Phe Ser Ala Ser Ser Thr Ser Glu Val
 340 345 350
 Ile Thr Arg Gln Lys Gln Leu Gln Ile Ile Val Lys Cys Glu Met Gly
 355 360 365
 His Asn Ser Thr Val Glu Ile Ile Tyr Ile Thr Glu Asp Asp Val Ile
 370 375 380
 Gln Ser Gln Asn Ala Leu Gly Lys Tyr Asn Thr Ser Met Ala Leu Phe
 385 390 395 400
 Glu Ser Asn Ser Phe Glu Lys Thr Ile Leu Glu Ser Pro Tyr Tyr Val
 405 410 415
 Asp Leu Asn Gln Thr Leu Phe Val Gln Val Ser Leu His Thr Ser Asp
 420 425 430
 Pro Asn Leu Val Val Phe Leu Asp Thr Cys Arg Ala Ser Pro Thr Ser
 435 440 445
 Asp Phe Ala Ser Pro Thr Tyr Asp Leu Ile Lys Ser Gly Cys Ser Arg
 450 455 460
 Asp Glu Thr Cys Lys Val Tyr Pro Leu Phe Gly His Tyr Gly Arg Phe
 465 470 475 480
 Gln Phe Asn Ala Phe Lys Phe Leu Arg Ser Met Ser Ser Val Tyr Leu
 485 490 495
 Gln Cys Lys Val Leu Ile Cys Asp Ser Ser Asp His Gln Ser Arg Cys
 500 505 510
 Asn Gln Gly Cys Val Ser Arg Ser Lys Arg Asp Ile Ser Ser Tyr Lys
 515 520 525
 Trp Lys Thr Asp Ser Ile Ile Gly Pro Ile Arg Leu Lys Arg Asp Arg
 530 535 540
 Ser Ala Ser Gly Asn Ser Gly Phe Gln His Glu Thr His Ala Glu Glu
 545 550 555 560
 Thr Pro Asn Gln Pro Phe Asn Ser Val His Leu Phe Ser Phe Met Val

565 570 575
 Leu Ala Leu Asn Val Val Thr Val Ala Thr Ile Thr Val Arg His Phe
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 <223> Description of Artificial Sequence: Synthetic
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 <223> Description of Artificial Sequence: Synthetic
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 <211> 47
 <212> DNA
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 <223> Description of Artificial Sequence: Synthetic
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 <213> Homo sapiens
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<210> 195

<211> 467

<212> PRT

<213> Homo sapiens

<400> 195

Met Arg Pro Gln Glu Leu Pro Arg Leu Ala Phe Pro Leu Leu Leu Leu
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Leu Leu Leu Leu Leu Pro Pro Pro Pro Cys Pro Ala His Ser Ala Thr
 20 25 30

Arg Phe Asp Pro Thr Trp Glu Ser Leu Asp Ala Arg Gln Leu Pro Ala
 35 40 45

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Phe | Asp | Gln | Ala | Lys | Phe | Gly | Ile | Phe | Ile | His | Trp | Gly | Val | Phe |
| 50 | | | | | | 55 | | | | | 60 | | | | |
| Ser | Val | Pro | Ser | Phe | Gly | Ser | Glu | Trp | Phe | Trp | Trp | Tyr | Trp | Gln | Lys |
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| Glu | Lys | Ile | Pro | Lys | Tyr | Val | Glu | Phe | Met | Lys | Asp | Asn | Tyr | Pro | Pro |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ser | Phe | Lys | Tyr | Glu | Asp | Phe | Gly | Pro | Leu | Phe | Thr | Ala | Lys | Phe | Phe |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Asn | Ala | Asn | Gln | Trp | Ala | Asp | Ile | Phe | Gln | Ala | Ser | Gly | Ala | Lys | Tyr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ile | Val | Leu | Thr | Ser | Lys | His | His | Glu | Gly | Phe | Thr | Leu | Trp | Gly | Ser |
| 130 | | | | | | 135 | | | | | 140 | | | | |
| Glu | Tyr | Ser | Trp | Asn | Trp | Asn | Ala | Ile | Asp | Glu | Gly | Pro | Lys | Arg | Asp |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ile | Val | Lys | Glu | Leu | Glu | Val | Ala | Ile | Arg | Asn | Arg | Thr | Asp | Leu | Arg |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Phe | Gly | Leu | Tyr | Tyr | Ser | Leu | Phe | Glu | Trp | Phe | His | Pro | Leu | Phe | Leu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Glu | Asp | Glu | Ser | Ser | Ser | Phe | His | Lys | Arg | Gln | Phe | Pro | Val | Ser | Lys |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Thr | Leu | Pro | Glu | Leu | Tyr | Glu | Leu | Val | Asn | Asn | Tyr | Gln | Pro | Glu | Val |
| 210 | | | | | | 215 | | | | | 220 | | | | |
| Leu | Trp | Ser | Asp | Gly | Asp | Gly | Gly | Ala | Pro | Asp | Gln | Tyr | Trp | Asn | Ser |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Thr | Gly | Phe | Leu | Ala | Trp | Leu | Tyr | Asn | Glu | Ser | Pro | Val | Arg | Gly | Thr |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Val | Val | Thr | Asn | Asp | Arg | Trp | Gly | Ala | Gly | Ser | Ile | Cys | Lys | His | Gly |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Gly | Phe | Tyr | Thr | Cys | Ser | Asp | Arg | Tyr | Asn | Pro | Gly | His | Leu | Leu | Pro |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| His | Lys | Trp | Glu | Asn | Cys | Met | Thr | Ile | Asp | Lys | Leu | Ser | Trp | Gly | Tyr |
| 290 | | | | | | 295 | | | | | 300 | | | | |
| Arg | Arg | Glu | Ala | Gly | Ile | Ser | Asp | Tyr | Leu | Thr | Ile | Glu | Glu | Leu | Val |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Lys | Gln | Leu | Val | Glu | Thr | Val | Ser | Cys | Gly | Gly | Asn | Leu | Leu | Met | Asn |
| | | | | 325 | | | | | 330 | | | | | 335 | |

Ile Gly Pro Thr Leu Asp Gly Thr Ile Ser Val Val Phe Glu Glu Arg
 340 345 350

Leu Arg Gln Val Gly Ser Trp Leu Lys Val Asn Gly Glu Ala Ile Tyr
 355 360 365

Glu Thr Tyr Thr Trp Arg Ser Gln Asn Asp Thr Val Thr Pro Asp Val
 370 375 380

Trp Tyr Thr Ser Lys Pro Lys Glu Lys Leu Val Tyr Ala Ile Phe Leu
 385 390 395 400

Lys Trp Pro Thr Ser Gly Gln Leu Phe Leu Gly His Pro Lys Ala Ile
 405 410 415

Leu Gly Ala Thr Glu Val Lys Leu Leu Gly His Gly Gln Pro Leu Asn
 420 425 430

Trp Ile Ser Leu Glu Gln Asn Gly Ile Met Val Glu Leu Pro Gln Leu
 435 440 445

Thr Ile His Gln Met Pro Cys Lys Trp Gly Trp Ala Leu Ala Leu Thr
 450 455 460

Asn Val Ile
 465

<210> 196

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 196

tggtttgacc aggccaagtt cgg

23

<210> 197

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 197

ggattcatcc tcaaggaaga gcgg

24

<210> 198

<211> 24
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 198
 aacttgccagc atcagccact ctgc

24

<210> 199
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 199
 ttccgtgccc agcttcggta gcgagtgggt ctggtgggtat tggca

45

<210> 200
 <211> 2372
 <212> DNA
 <213> Homo sapiens

<400> 200
 agcagggaaa tccggatgtc tccggttatga agtggagcag tgagtgtgag cctcaacata 60
 gttccagaac tctccatccg gactagttat tgagcatctg cctctcatat caccagtggc 120
 catctgaggt gtttccctgg ctctgaagg gtaggcacga tggccagggt cttcagcctg 180
 gtgttgcttc tcaactccat ctggaccacg aggtccttg tccaaggctc tttgcgtgca 240
 gaagagcttt ccatccagg gtcatgcaga attatgggga tcacccttgt gagcaaaaag 300
 gcgaaccagc agctgaattt cacagaagct aaggaggcct gtaggctgct gggactaagt 360
 ttggccggga aggaccaagt tgaaacagcc ttgaaagcta gctttgaaac ttgcagctat 420
 ggctgggttg gagatggatt cgtgggtcatc tctaggatta gcccaaaccc caagtgtggg 480
 aaaaatgggg tgggtgtcct gatttgggaag gttccagtga gccgacagtt tgcagcctat 540
 tgttacaact catctgatac ttggactaac tcgtgcattc cagaaattat caccacccaa 600
 gatcccatat tcaacactca aactgcaaca caaacaacag aatttattgt cagtgcagct 660
 acctactcgg tggcatcccc ttactctaca atacctgccc ctactactac tcctcctgct 720
 ccagcttcca cttctattcc acggagaaaa aaattgattt gtgtcacaga agtttttatg 780
 gaaactagca ccatgtctac agaaactgaa ccatttggtg aaaataaagc agcattcaag 840
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 gtccctaata tatcccactg ggagaaagga gttttgcaaa gtgcaaggac ctaaaacatc 1440

```

tcatcagtat ccagtggtaa aaaggcctcc tggctgtctg aggctaggtg ggttgaaagc 1500
caaggagtca ctgagaccaa ggctttctct actgattccg cagctcagac cctttcttca 1560
gctctgaaag agaaacacgt atcccacctg acatgtcctt ctgagcccg taagagcaaa 1620
agaatggcag aaaagtttag cccctgaaag ccatggagat tctcataact tgagacctaa 1680
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cactgtttag aacacacaca cttacttttt ctggtctcta cactgtctga tttttctct 1860
aggaaatata cttttacaag taacaaaaat aaaaactctt ataaatttct atttttatct 1920
gagttacaga aatgattact aaggaagatt actcagtaat ttgtttaaaa agtaataaaa 1980
ttcaacaaac atttgctgaa tagctactat atgtcaagt ctgtgcaagg tattactctc 2040
tgtaattgaa tattattcct caaaaaattg cacatagtag aacgctatct ggaagctat 2100
ttttttcagt tttgatattt ctactttatc tacttccaaa ctaattttta tttttgctga 2160
gactaatctt attcattttc tctaatatgg caaccattat aaccttaatt tattattaac 2220
atacctaaga agtacattgt tacctctata taccaaagca catttttaaaa gtgccattaa 2280
caaatgtatc actagccctc ctttttccaa caagaaggga ctgagagatg cagaaatatt 2340
tgtgacaaaa aattaaagca ttagaaaac tt 2372

```

<210> 201

<211> 322

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic protein

<400> 201

```

Met Ala Arg Cys Phe Ser Leu Val Leu Leu Leu Thr Ser Ile Trp Thr
  1             5             10             15

```

```

Thr Arg Leu Leu Val Gln Gly Ser Leu Arg Ala Glu Glu Leu Ser Ile
          20             25             30

```

```

Gln Val Ser Cys Arg Ile Met Gly Ile Thr Leu Val Ser Lys Lys Ala
          35             40             45

```

```

Asn Gln Gln Leu Asn Phe Thr Glu Ala Lys Glu Ala Cys Arg Leu Leu
          50             55             60

```

```

Gly Leu Ser Leu Ala Gly Lys Asp Gln Val Glu Thr Ala Leu Lys Ala
          65             70             75             80

```

```

Ser Phe Glu Thr Cys Ser Tyr Gly Trp Val Gly Asp Gly Phe Val Val
          85             90             95

```

```

Ile Ser Arg Ile Ser Pro Asn Pro Lys Cys Gly Lys Asn Gly Val Gly
          100             105             110

```

```

Val Leu Ile Trp Lys Val Pro Val Ser Arg Gln Phe Ala Ala Tyr Cys
          115             120             125

```

```

Tyr Asn Ser Ser Asp Thr Trp Thr Asn Ser Cys Ile Pro Glu Ile Ile
          130             135             140

```

Thr Thr Lys Asp Pro Ile Phe Asn Thr Gln Thr Ala Thr Gln Thr Thr
 145 150 155 160
 Glu Phe Ile Val Ser Asp Ser Thr Tyr Ser Val Ala Ser Pro Tyr Ser
 165 170 175
 Thr Ile Pro Ala Pro Thr Thr Thr Pro Pro Ala Pro Ala Ser Thr Ser
 180 185 190
 Ile Pro Arg Arg Lys Lys Leu Ile Cys Val Thr Glu Val Phe Met Glu
 195 200 205
 Thr Ser Thr Met Ser Thr Glu Thr Glu Pro Phe Val Glu Asn Lys Ala
 210 215 220
 Ala Phe Lys Asn Glu Ala Ala Gly Phe Gly Gly Val Pro Thr Ala Leu
 225 230 235 240
 Leu Val Leu Ala Leu Leu Phe Phe Gly Ala Ala Ala Gly Leu Gly Phe
 245 250 255
 Cys Tyr Val Lys Arg Tyr Val Lys Ala Phe Pro Phe Thr Asn Lys Asn
 260 265 270
 Gln Gln Lys Glu Met Ile Glu Thr Lys Val Val Lys Glu Glu Lys Ala
 275 280 285
 Asn Asp Ser Asn Pro Asn Glu Glu Ser Lys Lys Thr Asp Lys Asn Pro
 290 295 300
 Glu Glu Ser Lys Ser Pro Ser Lys Thr Thr Val Arg Cys Leu Glu Ala
 305 310 315 320
 Glu Val

<210> 202

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 202

gagctttcca tccaggtgtc atgc

24

<210> 203

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 203

gtcagtgaca gtacctactc gg

22

<210> 204

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 204

tggagcagga ggagtagtag tagg

24

<210> 205

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 205

aggaggcctg taggctgctg ggactaagtt tggccggcaa ggaccaagtt

50

<210> 206

<211> 1620

<212> DNA

<213> Homo sapiens

<220>

<221> modified_base

<222> (973)

<223> a, t, c or g

<220>

<221> modified_base

<222> (977)

<223> a, t, c or g

<220>

<221> modified_base

<222> (996)

<223> a, t, c or g

<220>

<221> modified_base

<222> (1003)

<223> a, t, c or g

<400> 206

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ggaaactgcc gccgctctgc cacggtctgc ccacccaacg cgaagacggt aaccctgtg 180
actttgactg gagagaagtg gagatcctga tgtttctcag tgccattgtg atgatgaaga 240
accgcagatc catcactgtg gagcaacata taggcaacat tttcatgttt agtaaagtgg 300
ccaacacaat tcttttcttc cgcttgataa ttgcgcatgg cctactttac atcacactct 360
gcatagtgtt cctgatgacg tgcaaaccac ccctatatat gggccctgag tatatcaagt 420
acttcaatga taaaaccatt gatgaggaac tagaacggga caagaggggtc acttggattg 480
tggagttctt tgccaattgg tctaattgact gccaatcatt tgcccctatc tatgctgacc 540
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tataccagcg ggccaagaaa ctatcaaagg ctggagacaa tatccctgag gagcagcctg 840
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```

<210> 207

<211> 296

<212> PRT

<213> Homo sapiens

<400> 207

```

Met Ala Val Leu Ala Pro Leu Ile Ala Leu Val Tyr Ser Val Pro Arg
  1              5              10              15

Leu Ser Arg Trp Leu Ala Gln Pro Tyr Tyr Leu Leu Ser Ala Leu Leu
  20              25              30

Ser Ala Ala Phe Leu Leu Val Arg Lys Leu Pro Pro Leu Cys His Gly
  35              40              45

Leu Pro Thr Gln Arg Glu Asp Gly Asn Pro Cys Asp Phe Asp Trp Arg
  50              55              60

Glu Val Glu Ile Leu Met Phe Leu Ser Ala Ile Val Met Met Lys Asn
  65              70              75              80

```


Arg Arg Ser Ile Thr Val Glu Gln His Ile Gly Asn Ile Phe Met Phe
 85 90 95
 Ser Lys Val Ala Asn Thr Ile Leu Phe Phe Arg Leu Asp Ile Arg Met
 100 105 110
 Gly Leu Leu Tyr Ile Thr Leu Cys Ile Val Phe Leu Met Thr Cys Lys
 115 120 125
 Pro Pro Leu Tyr Met Gly Pro Glu Tyr Ile Lys Tyr Phe Asn Asp Lys
 130 135 140
 Thr Ile Asp Glu Glu Leu Glu Arg Asp Lys Arg Val Thr Trp Ile Val
 145 150 155 160
 Glu Phe Phe Ala Asn Trp Ser Asn Asp Cys Gln Ser Phe Ala Pro Ile
 165 170 175
 Tyr Ala Asp Leu Ser Leu Lys Tyr Asn Cys Thr Gly Leu Asn Phe Gly
 180 185 190
 Lys Val Asp Val Gly Arg Tyr Thr Asp Val Ser Thr Arg Tyr Lys Val
 195 200 205
 Ser Thr Ser Pro Leu Thr Lys Gln Leu Pro Thr Leu Ile Leu Phe Gln
 210 215 220
 Gly Gly Lys Glu Ala Met Arg Arg Pro Gln Ile Asp Lys Lys Gly Arg
 225 230 235 240
 Ala Val Ser Trp Thr Phe Ser Glu Glu Asn Val Ile Arg Glu Phe Asn
 245 250 255
 Leu Asn Glu Leu Tyr Gln Arg Ala Lys Lys Leu Ser Lys Ala Gly Asp
 260 265 270
 Asn Ile Pro Glu Glu Gln Pro Val Ala Ser Thr Pro Thr Thr Val Ser
 275 280 285
 Asp Gly Glu Asn Lys Lys Asp Lys
 290 295

<210> 208

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 208

gcttgatata tcgcatgggc ctac

<210> 209
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 209
 tggagacaat atccctgagg 20

<210> 210
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 210
 aacagttggc cacagcatgg cagg 24

<210> 211
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 211
 ccattgatga ggaactagaa cgggacaaga gggtcacttg gattgtggag 50

<210> 212
 <211> 1985
 <212> DNA
 <213> Homo sapiens

<400> 212
 ggacagctcg cggcccccca gagctctagc cgctcaggag ctgcctgggg acgtttgccc 60
 tggggcccca gcctggcccg ggtcaccctg gcatgaggag atgggcctgt tgctcctggt 120
 cccattgtct ctgctgcccg gctcctacgg actgcccttc tacaacgggt tctactactc 180
 caacagcgcc aacgaccaga acctaggcaa cggatcatggc aaagacctcc ttaatggagt 240
 gaagctgggtg gtggagacac ccgaggagac cctgttcacc taccaagggg ccagtgtgat 300
 cctgccctgc cgtaccgct acgagccggc cctgggtctcc ccgcggcgtg tgcgtgtcaa 360
 atggtggaag ctgtcggaga acggggcccc agagaaggac gtgctggtgg ccatcgggct 420
 gaggcaccgc tcctttgggg actaccaagg ccgcgtgcac ctgcggcagg acaaagagca 480
 tgacgtctcg ctggagatcc aggatctgcg gctggaggac tatgggcgtt accgctgtga 540
 ggtcattgac gggctggagg atgaaagcgg tctggtggag ctggagctgc ggggtgtggt 600

```

ctttccttac cagtccccca acgggcgcta ccagttcaac ttccacgagg gccagcaggt 660
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aggggcccctc aggtgtgtgt actttggaca ataatgggtg ctatgactgc cttccgccaa 1860
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1920
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1980
aaaaaa

```

<210> 213

<211> 360

<212> PRT

<213> Homo sapiens

<400> 213

```

Met Gly Leu Leu Leu Val Pro Leu Leu Leu Leu Pro Gly Ser Tyr
  1                      5                      10          15

```

```

Gly Leu Pro Phe Tyr Asn Gly Phe Tyr Tyr Ser Asn Ser Ala Asn Asp
          20                      25          30

```

```

Gln Asn Leu Gly Asn Gly His Gly Lys Asp Leu Leu Asn Gly Val Lys
          35                      40          45

```

```

Leu Val Val Glu Thr Pro Glu Glu Thr Leu Phe Thr Tyr Gln Gly Ala
          50                      55          60

```

```

Ser Val Ile Leu Pro Cys Arg Tyr Arg Tyr Glu Pro Ala Leu Val Ser
          65                      70          75          80

```

```

Pro Arg Arg Val Arg Val Lys Trp Trp Lys Leu Ser Glu Asn Gly Ala
          85                      90          95

```

```

Pro Glu Lys Asp Val Leu Val Ala Ile Gly Leu Arg His Arg Ser Phe
          100                     105          110

```

```

Gly Asp Tyr Gln Gly Arg Val His Leu Arg Gln Asp Lys Glu His Asp

```

| 115 | | | | | 120 | | | | | 125 | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Val | Ser | Leu | Glu | Ile | Gln | Asp | Leu | Arg | Leu | Glu | Asp | Tyr | Gly | Arg | Tyr | |
| 130 | | | | | 135 | | | | | 140 | | | | | | |
| Arg | Cys | Glu | Val | Ile | Asp | Gly | Leu | Glu | Asp | Glu | Ser | Gly | Leu | Val | Glu | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Leu | Glu | Leu | Arg | Gly | Val | Val | Phe | Pro | Tyr | Gln | Ser | Pro | Asn | Gly | Arg | |
| 165 | | | | | 170 | | | | | 175 | | | | | | |
| Tyr | Gln | Phe | Asn | Phe | His | Glu | Gly | Gln | Gln | Val | Cys | Ala | Glu | Gln | Ala | |
| 180 | | | | | 185 | | | | | 190 | | | | | | |
| Ala | Val | Val | Ala | Ser | Phe | Glu | Gln | Leu | Phe | Arg | Ala | Trp | Glu | Glu | Gly | |
| 195 | | | | | 200 | | | | | 205 | | | | | | |
| Leu | Asp | Trp | Cys | Asn | Ala | Gly | Trp | Leu | Gln | Asp | Ala | Thr | Val | Gln | Tyr | |
| 210 | | | | | 215 | | | | | 220 | | | | | | |
| Pro | Ile | Met | Leu | Pro | Arg | Gln | Pro | Cys | Gly | Gly | Pro | Gly | Leu | Ala | Pro | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | |
| Gly | Val | Arg | Ser | Tyr | Gly | Pro | Arg | His | Arg | Arg | Leu | His | Arg | Tyr | Asp | |
| 245 | | | | | 250 | | | | | 255 | | | | | | |
| Val | Phe | Cys | Phe | Ala | Thr | Ala | Leu | Lys | Gly | Arg | Val | Tyr | Tyr | Leu | Glu | |
| 260 | | | | | 265 | | | | | 270 | | | | | | |
| His | Pro | Glu | Lys | Leu | Thr | Leu | Thr | Glu | Ala | Arg | Glu | Ala | Cys | Gln | Glu | |
| 275 | | | | | 280 | | | | | 285 | | | | | | |
| Asp | Asp | Ala | Thr | Ile | Ala | Lys | Val | Gly | Gln | Leu | Phe | Ala | Ala | Trp | Lys | |
| 290 | | | | | 295 | | | | | 300 | | | | | | |
| Phe | His | Gly | Leu | Asp | Arg | Cys | Asp | Ala | Gly | Trp | Leu | Ala | Asp | Gly | Ser | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | |
| Val | Arg | Tyr | Pro | Val | Val | His | Pro | His | Pro | Asn | Cys | Gly | Pro | Pro | Glu | |
| 325 | | | | | 330 | | | | | 335 | | | | | | |
| Pro | Gly | Val | Arg | Ser | Phe | Gly | Phe | Pro | Asp | Pro | Gln | Ser | Arg | Leu | Tyr | |
| 340 | | | | | 345 | | | | | 350 | | | | | | |
| Gly | Val | Tyr | Cys | Tyr | Arg | Gln | His | | | | | | | | | |
| 355 | | | | | 360 | | | | | | | | | | | |

<210> 214

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<400> 218
tgtccaaaagt acacacacct gagg 24

<210> 219
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 219
 gatgccacga tcgccaaggt gggacagctc tttgccgcct ggaag 45

<210> 220
 <211> 1503
 <212> DNA
 <213> Homo sapiens

<400> 220
 ggagagcggg gcgaagctgg ataacagggg accgatgatg tggcgaccat cagttctgct 60
 gcttctgttg ctactgaggc acggggccca ggggaagcca tccccagacg caggccctca 120
 tggccagggg aggggtgcacc aggcggcccc cctgagcgac gctcccatg atgacgcca 180
 cgggaacttc cagtacgacc atgaggcttt cctgggacgg gaagtggcca aggaattcga 240
 ccaactcacc ccagaggaaa gccaggcccc tctggggcgg atcgtggacc gcatggaccg 300
 cgcgggggac ggcgacggct ggggtgctgt ggccgagctt cgcgcgtgga tcgcgcacac 360
 gcagcagcgg cacatacggg actcgggtgag cgcggcctgg gacacgtacg acacggaccg 420
 cgacgggcgt gtgggttggg aggagctgcg caacgccacc tatggccact acgcgcccgg 480
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<210> 221
 <211> 328
 <212> PRT
 <213> Homo sapiens

<400> 221
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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|-----|-----|--|--|
| 1 | | | | | 5 | | | | | 10 | | | | | 15 | | | | | | | | | | |
| Gly | Ala | Gln | Gly | Lys | Pro | Ser | Pro | Asp | Ala | Gly | Pro | His | Gly | Gln | Gly | | | | | | | | | | |
| | | | 20 | | | | | | | 25 | | | | 30 | | | | | | | | | | | |
| Arg | Val | His | Gln | Ala | Ala | Pro | Leu | Ser | Asp | Ala | Pro | His | Asp | Asp | Ala | | | | | | | | | | |
| | | | 35 | | | | | | | 40 | | | | 45 | | | | | | | | | | | |
| His | Gly | Asn | Phe | Gln | Tyr | Asp | His | Glu | Ala | Phe | Leu | Gly | Arg | Glu | Val | | | | | | | | | | |
| | | | 50 | | | | | | | | | | 60 | | | | | | | | | | | | |
| Ala | Lys | Glu | Phe | Asp | Gln | Leu | Thr | Pro | Glu | Glu | Ser | Gln | Ala | Arg | Leu | | | | | | | | | | |
| | | | 65 | | | | 70 | | | | 75 | | | | 80 | | | | | | | | | | |
| Gly | Arg | Ile | Val | Asp | Arg | Met | Asp | Arg | Ala | Gly | Asp | Gly | Asp | Gly | Trp | | | | | | | | | | |
| | | | | | | 85 | | | | 90 | | | | | | | 95 | | | | | | | | |
| Val | Ser | Leu | Ala | Glu | Leu | Arg | Ala | Trp | Ile | Ala | His | Thr | Gln | Gln | Arg | | | | | | | | | | |
| | | | | | | 100 | | | | 105 | | | | 110 | | | | | | | | | | | |
| His | Ile | Arg | Asp | Ser | Val | Ser | Ala | Ala | Trp | Asp | Thr | Tyr | Asp | Thr | Asp | | | | | | | | | | |
| | | | | | | 115 | | | | 120 | | | | 125 | | | | | | | | | | | |
| Arg | Asp | Gly | Arg | Val | Gly | Trp | Glu | Glu | Leu | Arg | Asn | Ala | Thr | Tyr | Gly | | | | | | | | | | |
| | | | | | | 130 | | | | | | | 140 | | | | | | | | | | | | |
| His | Tyr | Ala | Pro | Gly | Glu | Glu | Phe | His | Asp | Val | Glu | Asp | Ala | Glu | Thr | | | | | | | | | | |
| | | | | | | | | | 150 | | | | 155 | | | | 160 | | | | | | | | |
| Tyr | Lys | Lys | Met | Leu | Ala | Arg | Asp | Glu | Arg | Arg | Phe | Arg | Val | Ala | Asp | | | | | | | | | | |
| | | | | | | 165 | | | | | | | | | | 175 | | | | | | | | | |
| Gln | Asp | Gly | Asp | Ser | Met | Ala | Thr | Arg | Glu | Glu | Leu | Thr | Ala | Phe | Leu | | | | | | | | | | |
| | | | | | | | | | | | | | | | 190 | | | | | | | | | | |
| His | Pro | Glu | Glu | Phe | Pro | His | Met | Arg | Asp | Ile | Val | Ile | Ala | Glu | Thr | | | | | | | | | | |
| | | | | | | | | | 200 | | | | | | | 205 | | | | | | | | | |
| Leu | Glu | Asp | Leu | Asp | Arg | Asn | Lys | Asp | Gly | Tyr | Val | Gln | Val | Glu | Glu | | | | | | | | | | |
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| Trp | Val | Gln | Thr | Glu | Arg | Gln | Gln | Phe | Arg | Asp | Phe | Arg | Asp | Leu | Asn | | | | | | | | | | |
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| Lys | Asp | Gly | His | Leu | Asp | Gly | Ser | Glu | Val | Gly | His | Trp | Val | Leu | Pro | | | | | | | | | | |
| | | | | | | | | | | | | | | | 260 | | | | 265 | | | | 270 | | |
| Pro | Ala | Gln | Asp | Gln | Pro | Leu | Val | Glu | Ala | Asn | His | Leu | Leu | His | Glu | | | | | | | | | | |
| | | | | | | | | | | | | | | | 275 | | | | 280 | | | | 285 | | |

Ser Asp Thr Asp Lys Asp Gly Arg Leu Ser Lys Ala Glu Ile Leu Gly
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Asn Trp Asn Met Phe Val Gly Ser Gln Ala Thr Asn Tyr Gly Glu Asp
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Leu Thr Arg His His Asp Glu Leu
 325

<210> 222

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 222

cgcaggccct catggccagg

20

<210> 223

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 223

gaaatcctgg gtaattgg

18

<210> 224

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 224

gtgcgcggtg ctcacagctc atc

23

<210> 225

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 225
 cccccctgag cgacgctccc ccatgatgac gcccacggga actt

44

<210> 226
 <211> 2403
 <212> DNA
 <213> Homo sapiens

<400> 226
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 aaa 2403

<210> 227

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 260 265 270
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 275 280 285
 Ala Arg Glu Phe Gly Val Asn Val Phe Ile Val Ser Val Ala Lys Pro
 290 295 300
 Ile Pro Glu Glu Leu Gly Met Val Gln Asp Val Thr Phe Val Asp Lys
 305 310 315 320
 Ala Val Cys Arg Asn Asn Gly Phe Phe Ser Tyr His Met Pro Asn Trp
 325 330 335
 Phe Gly Thr Thr Lys Tyr Val Lys Pro Leu Val Gln Lys Leu Cys Thr
 340 345 350
 His Glu Gln Met Met Cys Ser Lys Thr Cys Tyr Asn Ser Val Asn Ile
 355 360 365
 Ala Phe Leu Ile Asp Gly Ser Ser Ser Val Gly Asp Ser Asn Phe Arg
 370 375 380
 Leu Met Leu Glu Phe Val Ser Asn Ile Ala Lys Thr Phe Glu Ile Ser
 385 390 395 400
 Asp Ile Gly Ala Lys Ile Ala Ala Val Gln Phe Thr Tyr Asp Gln Arg
 405 410 415
 Thr Glu Phe Ser Phe Thr Asp Tyr Ser Thr Lys Glu Asn Val Leu Ala
 420 425 430
 Val Ile Arg Asn Ile Arg Tyr Met Ser Gly Gly Thr Ala Thr Gly Asp
 435 440 445
 Ala Ile Ser Phe Thr Val Arg Asn Val Phe Gly Pro Ile Arg Glu Ser
 450 455 460
 Pro Asn Lys Asn Phe Leu Val Ile Val Thr Asp Gly Gln Ser Tyr Asp
 465 470 475 480
 Asp Val Gln Gly Pro Ala Ala Ala Ala His Asp Ala Gly Ile Thr Ile
 485 490 495
 Phe Ser Val Gly Val Ala Trp Ala Pro Leu Asp Asp Leu Lys Asp Met
 500 505 510
 Ala Ser Lys Pro Lys Glu Ser His Ala Phe Phe Thr Arg Glu Phe Thr
 515 520 525
 Gly Leu Glu Pro Ile Val Ser Asp Val Ile Arg Gly Ile Cys Arg Asp
 530 535 540

Phe Leu Glu Ser Gln Gln
545 550

<210> 228

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 228

tggtctcgca caccgatc

18

<210> 229

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 229

ctgctgtcca caggggag

18

<210> 230

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 230

ccttgaagca tactgctc

18

<210> 231

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide probe

<400> 231

gagatagcaa tttccgcc

18

<210> 232

<211> 18
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 232
 ttctctcaaga gggcagcc

18

<210> 233
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 233
 cttggcacca atgtccgaga ttcc

24

<210> 234
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 234
 gctctgagga aggtgacgcg cggggcctcc gaacccttgg ccttg

45

<210> 235
 <211> 2586
 <212> DNA
 <213> Homo sapiens

<400> 235
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 gtcggggcgg cggtgcggg cgcagagcgg agatgcagcg gcttggggcc accctgctgt 180
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 ctccagtcaa gcccggcccc gctctcagct acccgagga ggaggccacc ctcaatgaga 300
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<210> 236

<211> 350

<212> PRT

<213> Homo sapiens

<400> 236

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Val Pro Thr Ala Pro Ala Pro Ala Pro Thr Ala Thr Ser Ala Pro Val
 20 25 30

Lys Pro Gly Pro Ala Leu Ser Tyr Pro Gln Glu Glu Ala Thr Leu Asn
 35 40 45

Glu Met Phe Arg Glu Val Glu Glu Leu Met Glu Asp Thr Gln His Lys
 50 55 60

Leu Arg Ser Ala Val Glu Glu Met Glu Ala Glu Glu Ala Ala Ala Lys
 65 70 75 80

Ala Ser Ser Glu Val Asn Leu Ala Asn Leu Pro Pro Ser Tyr His Asn
 85 90 95
 Glu Thr Asn Thr Asp Thr Lys Val Gly Asn Asn Thr Ile His Val His
 100 105 110
 Arg Glu Ile His Lys Ile Thr Asn Asn Gln Thr Gly Gln Met Val Phe
 115 120 125
 Ser Glu Thr Val Ile Thr Ser Val Gly Asp Glu Glu Gly Arg Arg Ser
 130 135 140
 His Glu Cys Ile Ile Asp Glu Asp Cys Gly Pro Ser Met Tyr Cys Gln
 145 150 155 160
 Phe Ala Ser Phe Gln Tyr Thr Cys Gln Pro Cys Arg Gly Gln Arg Met
 165 170 175
 Leu Cys Thr Arg Asp Ser Glu Cys Cys Gly Asp Gln Leu Cys Val Trp
 180 185 190
 Gly His Cys Thr Lys Met Ala Thr Arg Gly Ser Asn Gly Thr Ile Cys
 195 200 205
 Asp Asn Gln Arg Asp Cys Gln Pro Gly Leu Cys Cys Ala Phe Gln Arg
 210 215 220
 Gly Leu Leu Phe Pro Val Cys Thr Pro Leu Pro Val Glu Gly Glu Leu
 225 230 235 240
 Cys His Asp Pro Ala Ser Arg Leu Leu Asp Leu Ile Thr Trp Glu Leu
 245 250 255
 Glu Pro Asp Gly Ala Leu Asp Arg Cys Pro Cys Ala Ser Gly Leu Leu
 260 265 270
 Cys Gln Pro His Ser His Ser Leu Val Tyr Val Cys Lys Pro Thr Phe
 275 280 285
 Val Gly Ser Arg Asp Gln Asp Gly Glu Ile Leu Leu Pro Arg Glu Val
 290 295 300
 Pro Asp Glu Tyr Glu Val Gly Ser Phe Met Glu Glu Val Arg Gln Glu
 305 310 315 320
 Leu Glu Asp Leu Glu Arg Ser Leu Thr Glu Glu Met Ala Leu Gly Glu
 325 330 335
 Pro Ala Ala Ala Ala Ala Ala Leu Leu Gly Gly Glu Glu Ile
 340 345 350

<210> 237

<210> 242
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 242
 ctccagctcc tggcgcacct cctc

24

<210> 243
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 243
 ggctctcagc taccgcgcag gagcgaggcc accctcaatg agatg

45

<210> 244
 <211> 3679
 <212> DNA
 <213> Homo Sapien

<400> 244
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<400> 245

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| Met | Arg | Leu | Leu | Val | Ala | Pro | Leu | Leu | Leu | Ala | Trp | Val | Ala | Gly |
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| Ala | Thr | Ala | Thr | Val | Pro | Val | Val | Pro | Trp | His | Val | Pro | Cys | Pro |
| | | | | 20 | | | | | 25 | | | | | 30 |
| Pro | Gln | Cys | Ala | Cys | Gln | Ile | Arg | Pro | Trp | Tyr | Thr | Pro | Arg | Ser |
| | | | | 35 | | | | | 40 | | | | | 45 |
| Ser | Tyr | Arg | Glu | Ala | Thr | Thr | Val | Asp | Cys | Asn | Asp | Leu | Phe | Leu |
| | | | | 50 | | | | | 55 | | | | | 60 |
| Thr | Ala | Val | Pro | Pro | Ala | Leu | Pro | Ala | Gly | Thr | Gln | Thr | Leu | Leu |
| | | | | 65 | | | | | 70 | | | | | 75 |
| Leu | Gln | Ser | Asn | Ser | Ile | Val | Arg | Val | Asp | Gln | Ser | Glu | Leu | Gly |
| | | | | 80 | | | | | 85 | | | | | 90 |
| Tyr | Leu | Ala | Asn | Leu | Thr | Glu | Leu | Asp | Leu | Ser | Gln | Asn | Ser | Phe |
| | | | | 95 | | | | | 100 | | | | | 105 |
| Ser | Asp | Ala | Arg | Asp | Cys | Asp | Phe | His | Ala | Leu | Pro | Gln | Leu | Leu |
| | | | | 110 | | | | | 115 | | | | | 120 |
| Ser | Leu | His | Leu | Glu | Glu | Asn | Gln | Leu | Thr | Arg | Leu | Glu | Asp | His |
| | | | | 125 | | | | | 130 | | | | | 135 |
| Ser | Phe | Ala | Gly | Leu | Ala | Ser | Leu | Gln | Glu | Leu | Tyr | Leu | Asn | His |
| | | | | 140 | | | | | 145 | | | | | 150 |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Asn | Gln | Leu | Tyr | Arg | Ile | Ala | Pro | Arg | Ala | Phe | Ser | Gly | Leu | Ser | |
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| Asn | Leu | Leu | Arg | Leu | His | Leu | Asn | Ser | Asn | Leu | Leu | Arg | Ala | Ile | |
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| Asp | Ser | Arg | Trp | Phe | Glu | Met | Leu | Pro | Asn | Leu | Glu | Ile | Leu | Met | |
| | | | | 185 | | | | | 190 | | | | | 195 | |
| Ile | Gly | Gly | Asn | Lys | Val | Asp | Ala | Ile | Leu | Asp | Met | Asn | Phe | Arg | |
| | | | | 200 | | | | | 205 | | | | | 210 | |
| Pro | Leu | Ala | Asn | Leu | Arg | Ser | Leu | Val | Leu | Ala | Gly | Met | Asn | Leu | |
| | | | | 215 | | | | | 220 | | | | | 225 | |
| Arg | Glu | Ile | Ser | Asp | Tyr | Ala | Leu | Glu | Gly | Leu | Gln | Ser | Leu | Glu | |
| | | | | 230 | | | | | 235 | | | | | 240 | |
| Ser | Leu | Ser | Phe | Tyr | Asp | Asn | Gln | Leu | Ala | Arg | Val | Pro | Arg | Arg | |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Ala | Leu | Glu | Gln | Val | Pro | Gly | Leu | Lys | Phe | Leu | Asp | Leu | Asn | Lys | |
| | | | | 260 | | | | | 265 | | | | | 270 | |
| Asn | Pro | Leu | Gln | Arg | Val | Gly | Pro | Gly | Asp | Phe | Ala | Asn | Met | Leu | |
| | | | | 275 | | | | | 280 | | | | | 285 | |
| His | Leu | Lys | Glu | Leu | Gly | Leu | Asn | Asn | Met | Glu | Glu | Leu | Val | Ser | |
| | | | | 290 | | | | | 295 | | | | | 300 | |
| Ile | Asp | Lys | Phe | Ala | Leu | Val | Asn | Leu | Pro | Glu | Leu | Thr | Lys | Leu | |
| | | | | 305 | | | | | 310 | | | | | 315 | |
| Asp | Ile | Thr | Asn | Asn | Pro | Arg | Leu | Ser | Phe | Ile | His | Pro | Arg | Ala | |
| | | | | 320 | | | | | 325 | | | | | 330 | |
| Phe | His | His | Leu | Pro | Gln | Met | Glu | Thr | Leu | Met | Leu | Asn | Asn | Asn | |
| | | | | 335 | | | | | 340 | | | | | 345 | |
| Ala | Leu | Ser | Ala | Leu | His | Gln | Gln | Thr | Val | Glu | Ser | Leu | Pro | Asn | |
| | | | | 350 | | | | | 355 | | | | | 360 | |
| Leu | Gln | Glu | Val | Gly | Leu | His | Gly | Asn | Pro | Ile | Arg | Cys | Asp | Cys | |
| | | | | 365 | | | | | 370 | | | | | 375 | |
| Val | Ile | Arg | Trp | Ala | Asn | Ala | Thr | Gly | Thr | Arg | Val | Arg | Phe | Ile | |
| | | | | 380 | | | | | 385 | | | | | 390 | |
| Glu | Pro | Gln | Ser | Thr | Leu | Cys | Ala | Glu | Pro | Pro | Asp | Leu | Gln | Arg | |
| | | | | 395 | | | | | 400 | | | | | 405 | |
| Leu | Pro | Val | Arg | Glu | Val | Pro | Phe | Arg | Glu | Met | Thr | Asp | His | Cys | |

| | | | | | |
|-----------------|---------------------|-------------------------|-----|--|-----|
| | 410 | | 415 | | 420 |
| Leu Pro Leu Ile | Ser Pro Arg Ser Phe | Pro Pro Ser Leu Gln Val | | | |
| | 425 | | 430 | | 435 |
| Ala Ser Gly Glu | Ser Met Val Leu His | Cys Arg Ala Leu Ala Glu | | | |
| | 440 | | 445 | | 450 |
| Pro Glu Pro Glu | Ile Tyr Trp Val Thr | Pro Ala Gly Leu Arg Leu | | | |
| | 455 | | 460 | | 465 |
| Thr Pro Ala His | Ala Gly Arg Arg Tyr | Arg Val Tyr Pro Glu Gly | | | |
| | 470 | | 475 | | 480 |
| Thr Leu Glu Leu | Arg Arg Val Thr Ala | Glu Glu Ala Gly Leu Tyr | | | |
| | 485 | | 490 | | 495 |
| Thr Cys Val Ala | Gln Asn Leu Val Gly | Ala Asp Thr Lys Thr Val | | | |
| | 500 | | 505 | | 510 |
| Ser Val Val Val | Gly Arg Ala Leu Leu | Gln Pro Gly Arg Asp Glu | | | |
| | 515 | | 520 | | 525 |
| Gly Gln Gly Leu | Glu Leu Arg Val Gln | Glu Thr His Pro Tyr His | | | |
| | 530 | | 535 | | 540 |
| Ile Leu Leu Ser | Trp Val Thr Pro Pro | Asn Thr Val Ser Thr Asn | | | |
| | 545 | | 550 | | 555 |
| Leu Thr Trp Ser | Ser Ala Ser Ser Leu | Arg Gly Gln Gly Ala Thr | | | |
| | 560 | | 565 | | 570 |
| Ala Leu Ala Arg | Leu Pro Arg Gly Thr | His Ser Tyr Asn Ile Thr | | | |
| | 575 | | 580 | | 585 |
| Arg Leu Leu Gln | Ala Thr Glu Tyr Trp | Ala Cys Leu Gln Val Ala | | | |
| | 590 | | 595 | | 600 |
| Phe Ala Asp Ala | His Thr Gln Leu Ala | Cys Val Trp Ala Arg Thr | | | |
| | 605 | | 610 | | 615 |
| Lys Glu Ala Thr | Ser Cys His Arg Ala | Leu Gly Asp Arg Pro Gly | | | |
| | 620 | | 625 | | 630 |
| Leu Ile Ala Ile | Leu Ala Leu Ala Val | Leu Leu Leu Ala Ala Gly | | | |
| | 635 | | 640 | | 645 |
| Leu Ala Ala His | Leu Gly Thr Gly Gln | Pro Arg Lys Gly Val Gly | | | |
| | 650 | | 655 | | 660 |
| Gly Arg Arg Pro | Leu Pro Pro Ala Trp | Ala Phe Trp Gly Trp Ser | | | |
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<212> PRT

<213> Homo Sapien

<400> 250

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| Met | Arg | Gln | Thr | Ile | Ile | Lys | Val | Ile | Lys | Phe | Ile | Leu | Ile | Ile |
| 1 | | | | 5 | | | | | 10 | | | | | 15 |
| Cys | Tyr | Thr | Val | Tyr | Tyr | Val | His | Asn | Ile | Lys | Phe | Asp | Val | Asp |
| | | | | 20 | | | | | 25 | | | | | 30 |
| Cys | Thr | Val | Asp | Ile | Glu | Ser | Leu | Thr | Gly | Tyr | Arg | Thr | Tyr | Arg |
| | | | | 35 | | | | | 40 | | | | | 45 |
| Cys | Ala | His | Pro | Leu | Ala | Thr | Leu | Phe | Lys | Ile | Leu | Ala | Ser | Phe |
| | | | | 50 | | | | | 55 | | | | | 60 |
| Tyr | Ile | Ser | Leu | Val | Ile | Phe | Tyr | Gly | Leu | Ile | Cys | Met | Tyr | Thr |
| | | | | 65 | | | | | 70 | | | | | 75 |
| Leu | Trp | Trp | Met | Leu | Arg | Arg | Ser | Leu | Lys | Lys | Tyr | Ser | Phe | Glu |
| | | | | 80 | | | | | 85 | | | | | 90 |
| Ser | Ile | Arg | Glu | Glu | Ser | Ser | Tyr | Ser | Asp | Ile | Pro | Asp | Val | Lys |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Lys | Thr | Ile | Glu | Glu | Ile | Ile | Ser | Phe | Gln | His | Leu | His |
| | | | | 365 | | | | | 370 | | | | | 375 |
| Arg | Leu | Thr | Cys | Leu | Lys | Leu | Trp | Tyr | Asn | His | Ile | Ala | Tyr | Ile |
| | | | | 380 | | | | | 385 | | | | | 390 |
| Pro | Ile | Gln | Ile | Gly | Asn | Leu | Thr | Asn | Leu | Glu | Arg | Leu | Tyr | Leu |
| | | | | 395 | | | | | 400 | | | | | 405 |
| Asn | Arg | Asn | Lys | Ile | Glu | Lys | Ile | Pro | Thr | Gln | Leu | Phe | Tyr | Cys |
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| Arg | Lys | Leu | Arg | Tyr | Leu | Asp | Leu | Ser | His | Asn | Asn | Leu | Thr | Phe |
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| Ile | Thr | Ala | Asn | Arg | Ile | Glu | Thr | Leu | Pro | Pro | Glu | Leu | Phe | Gln |
| | | | | 455 | | | | | 460 | | | | | 465 |
| Cys | Arg | Lys | Leu | Arg | Ala | Leu | His | Leu | Gly | Asn | Asn | Val | Leu | Gln |
| | | | | 470 | | | | | 475 | | | | | 480 |
| Ser | Leu | Pro | Ser | Arg | Val | Gly | Glu | Leu | Thr | Asn | Leu | Thr | Gln | Ile |
| | | | | 485 | | | | | 490 | | | | | 495 |
| Glu | Leu | Arg | Gly | Asn | Arg | Leu | Glu | Cys | Leu | Pro | Val | Glu | Leu | Gly |
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| Glu | Cys | Pro | Leu | Leu | Lys | Arg | Ser | Gly | Leu | Val | Val | Glu | Glu | Asp |
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| Leu | Phe | Asn | Thr | Leu | Pro | Pro | Glu | Val | Lys | Glu | Arg | Leu | Trp | Arg |
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<212> DNA

<213> Homo Sapien

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<211> 452

<212> PRT

<213> Homo Sapien

<400> 255

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| Leu | Leu | Pro | Leu | Leu | Leu | Gly | Leu | Asn | Ala | Gly | Ala | Val | Ile | Asp |
| | | | | 20 | | | | | 25 | | | | | 30 |
| Trp | Pro | Thr | Glu | Glu | Gly | Lys | Glu | Val | Trp | Asp | Tyr | Val | Thr | Val |
| | | | | 35 | | | | | 40 | | | | | 45 |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Lys | Asp | Ala | Tyr | Met | Phe | Trp | Trp | Leu | Tyr | Tyr | Ala | Thr | Asn | 50 | 55 | 60 |
| Ser | Cys | Lys | Asn | Phe | Ser | Glu | Leu | Pro | Leu | Val | Met | Trp | Leu | Gln | 65 | 70 | 75 |
| Gly | Gly | Pro | Gly | Gly | Ser | Ser | Thr | Gly | Phe | Gly | Asn | Phe | Glu | Glu | 80 | 85 | 90 |
| Ile | Gly | Pro | Leu | Asp | Ser | Asp | Leu | Lys | Pro | Arg | Lys | Thr | Thr | Trp | 95 | 100 | 105 |
| Leu | Gln | Ala | Ala | Ser | Leu | Leu | Phe | Val | Asp | Asn | Pro | Val | Gly | Thr | 110 | 115 | 120 |
| Gly | Phe | Ser | Tyr | Val | Asn | Gly | Ser | Gly | Ala | Tyr | Ala | Lys | Asp | Leu | 125 | 130 | 135 |
| Ala | Met | Val | Ala | Ser | Asp | Met | Met | Val | Leu | Leu | Lys | Thr | Phe | Phe | 140 | 145 | 150 |
| Ser | Cys | His | Lys | Glu | Phe | Gln | Thr | Val | Pro | Phe | Tyr | Ile | Phe | Ser | 155 | 160 | 165 |
| Glu | Ser | Tyr | Gly | Gly | Lys | Met | Ala | Ala | Gly | Ile | Gly | Leu | Glu | Leu | 170 | 175 | 180 |
| Tyr | Lys | Ala | Ile | Gln | Arg | Gly | Thr | Ile | Lys | Cys | Asn | Phe | Ala | Gly | 185 | 190 | 195 |
| Val | Ala | Leu | Gly | Asp | Ser | Trp | Ile | Ser | Pro | Val | Asp | Ser | Val | Leu | 200 | 205 | 210 |
| Ser | Trp | Gly | Pro | Tyr | Leu | Tyr | Ser | Met | Ser | Leu | Leu | Glu | Asp | Lys | 215 | 220 | 225 |
| Gly | Leu | Ala | Glu | Val | Ser | Lys | Val | Ala | Glu | Gln | Val | Leu | Asn | Ala | 230 | 235 | 240 |
| Val | Asn | Lys | Gly | Leu | Tyr | Arg | Glu | Ala | Thr | Glu | Leu | Trp | Gly | Lys | 245 | 250 | 255 |
| Ala | Glu | Met | Ile | Ile | Glu | Gln | Asn | Thr | Asp | Gly | Val | Asn | Phe | Tyr | 260 | 265 | 270 |
| Asn | Ile | Leu | Thr | Lys | Ser | Thr | Pro | Thr | Ser | Thr | Met | Glu | Ser | Ser | 275 | 280 | 285 |
| Leu | Glu | Phe | Thr | Gln | Ser | His | Leu | Val | Cys | Leu | Cys | Gln | Arg | His | 290 | 295 | 300 |
| Val | Arg | His | Leu | Gln | Arg | Asp | Ala | Leu | Ser | Gln | Leu | Met | Asn | Gly | | | |

| | | |
|-------------------------------------|-------------------------|-----|
| 305 | 310 | 315 |
| Pro Ile Arg Lys Lys Leu Lys Ile Ile | Pro Glu Asp Gln Ser Trp | |
| 320 | 325 | 330 |
| Gly Gly Gln Ala Thr Asn Val Phe Val | Asn Met Glu Glu Asp Phe | |
| 335 | 340 | 345 |
| Met Lys Pro Val Ile Ser Ile Val Asp | Glu Leu Leu Glu Ala Gly | |
| 350 | 355 | 360 |
| Ile Asn Val Thr Val Tyr Asn Gly Gln | Leu Asp Leu Ile Val Asp | |
| 365 | 370 | 375 |
| Thr Met Gly Gln Glu Ala Trp Val Arg | Lys Leu Lys Trp Pro Glu | |
| 380 | 385 | 390 |
| Leu Pro Lys Phe Ser Gln Leu Lys Trp | Lys Ala Leu Tyr Ser Asp | |
| 395 | 400 | 405 |
| Pro Lys Ser Leu Glu Thr Ser Ala Phe | Val Lys Ser Tyr Lys Asn | |
| 410 | 415 | 420 |
| Leu Ala Phe Tyr Trp Ile Leu Lys Ala | Gly His Met Val Pro Ser | |
| 425 | 430 | 435 |
| Asp Gln Gly Asp Met Ala Leu Lys Met | Met Arg Leu Val Thr Gln | |
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<211> 1100

<212> DNA

<213> Homo Sapien

<400> 256

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<210> 257
<211> 314
<212> PRT
<213> Homo Sapien
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<400> 257
Met Gly Ala Arg Gly Ala Leu Leu Leu Ala Leu Leu Leu Ala Arg
 1          5          10          15

Ala Gly Leu Arg Lys Pro Glu Ser Gln Glu Ala Ala Pro Leu Ser
          20          25          30

Gly Pro Cys Gly Arg Arg Val Ile Thr Ser Arg Ile Val Gly Gly
          35          40          45

Glu Asp Ala Glu Leu Gly Arg Trp Pro Trp Gln Gly Ser Leu Arg
          50          55          60

Leu Trp Asp Ser His Val Cys Gly Val Ser Leu Leu Ser His Arg
          65          70          75

Trp Ala Leu Thr Ala Ala His Cys Phe Glu Thr Tyr Ser Asp Leu
          80          85          90

```

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Asp | Pro | Ser | Gly | Trp | Met | Val | Gln | Phe | Gly | Gln | Leu | Thr | Ser | 95 | 100 | 105 |
| Met | Pro | Ser | Phe | Trp | Ser | Leu | Gln | Ala | Tyr | Tyr | Thr | Arg | Tyr | Phe | 110 | 115 | 120 |
| Val | Ser | Asn | Ile | Tyr | Leu | Ser | Pro | Arg | Tyr | Leu | Gly | Asn | Ser | Pro | 125 | 130 | 135 |
| Tyr | Asp | Ile | Ala | Leu | Val | Lys | Leu | Ser | Ala | Pro | Val | Thr | Tyr | Thr | 140 | 145 | 150 |
| Lys | His | Ile | Gln | Pro | Ile | Cys | Leu | Gln | Ala | Ser | Thr | Phe | Glu | Phe | 155 | 160 | 165 |
| Glu | Asn | Arg | Thr | Asp | Cys | Trp | Val | Thr | Gly | Trp | Gly | Tyr | Ile | Lys | 170 | 175 | 180 |
| Glu | Asp | Glu | Ala | Leu | Pro | Ser | Pro | His | Thr | Leu | Gln | Glu | Val | Gln | 185 | 190 | 195 |
| Val | Ala | Ile | Ile | Asn | Asn | Ser | Met | Cys | Asn | His | Leu | Phe | Leu | Lys | 200 | 205 | 210 |
| Tyr | Ser | Phe | Arg | Lys | Asp | Ile | Phe | Gly | Asp | Met | Val | Cys | Ala | Gly | 215 | 220 | 225 |
| Asn | Ala | Gln | Gly | Gly | Lys | Asp | Ala | Cys | Phe | Gly | Asp | Ser | Gly | Gly | 230 | 235 | 240 |
| Pro | Leu | Ala | Cys | Asn | Lys | Asn | Gly | Leu | Trp | Tyr | Gln | Ile | Gly | Val | 245 | 250 | 255 |
| Val | Ser | Trp | Gly | Val | Gly | Cys | Gly | Arg | Pro | Asn | Arg | Pro | Gly | Val | 260 | 265 | 270 |
| Tyr | Thr | Asn | Ile | Ser | His | His | Phe | Glu | Trp | Ile | Gln | Lys | Leu | Met | 275 | 280 | 285 |
| Ala | Gln | Ser | Gly | Met | Ser | Gln | Pro | Asp | Pro | Ser | Trp | Pro | Leu | Leu | 290 | 295 | 300 |
| Phe | Phe | Pro | Leu | Leu | Trp | Ala | Leu | Pro | Leu | Leu | Gly | Pro | Val | | 305 | 310 | |

<210> 258

<211> 2427

<212> DNA

<213> Homo Sapien

<400> 258

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 gaacctcggc ctctactcca gtgtttgggg ggatcctatc cttgatcaat 1500
 gagcacagga tccttagtg ggcgccccct cttggctttc tcaacccaag 1550
 gctctaccag cagcatgggg caggtctctt tgatgtaacc cgtggctgcc 1600
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 cctggctggg atcctgtaac aggtgggga acaccaactt cccagctttg 1700
 ctgaagactc tactcaaccc ctgacccttt cctatcagga gagatggctt 1750
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 aacctgaaa tgcgtgagc ttgacttgac tcccaacctt accatgctcc 1900
 atcactactca ggtctcccta ctctgcctt agattcctca ataagatgct 1950
 gtaactagca ttttttgaat gcctctccct ccgcatctca tctttctctt 2000
 ttcaatcagg cttttccaaa gggttgtata cagactctgt gcactatttc 2050
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 ccttacttag ctccagggtc ttaacttctc tgactactct tgtcttcctc 2250
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 tgtagatttt tgcctctctc agtttactca ttgtcccttg gaacaaatca 2350
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 aatgattgat acctcaaatg taaaaaa 2427

<210> 259

<211> 556

<212> PRT

<213> Homo Sapien

<400> 259

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Leu | Gln | Ala | Cys | Leu | Leu | Gly | Leu | Phe | Ala | Leu | Ile | Leu |
| 1 | | | | | 5 | | | | 10 | | | | 15 | |

Ser Gly Lys Cys Ser Tyr Ser Pro Glu Pro Asp Gln Arg Arg Thr

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|
| | | | | 20 | | | | | 25 | | | | | 30 |
| Leu | Pro | Pro | Gly | Trp
35 | Val | Ser | Leu | Gly | Arg
40 | Ala | Asp | Pro | Glu | Glu
45 |
| Glu | Leu | Ser | Leu | Thr
50 | Phe | Ala | Leu | Arg | Gln
55 | Gln | Asn | Val | Glu | Arg
60 |
| Leu | Ser | Glu | Leu | Val
65 | Gln | Ala | Val | Ser | Asp
70 | Pro | Ser | Ser | Pro | Gln
75 |
| Tyr | Gly | Lys | Tyr | Leu
80 | Thr | Leu | Glu | Asn | Val
85 | Ala | Asp | Leu | Val | Arg
90 |
| Pro | Ser | Pro | Leu | Thr
95 | Leu | His | Thr | Val | Gln
100 | Lys | Trp | Leu | Leu | Ala
105 |
| Ala | Gly | Ala | Gln | Lys
110 | Cys | His | Ser | Val | Ile
115 | Thr | Gln | Asp | Phe | Leu
120 |
| Thr | Cys | Trp | Leu | Ser
125 | Ile | Arg | Gln | Ala | Glu
130 | Leu | Leu | Leu | Pro | Gly
135 |
| Ala | Glu | Phe | His | His
140 | Tyr | Val | Gly | Gly | Pro
145 | Thr | Glu | Thr | His | Val
150 |
| Val | Arg | Ser | Pro | His
155 | Pro | Tyr | Gln | Leu | Pro
160 | Gln | Ala | Leu | Ala | Pro
165 |
| His | Val | Asp | Phe | Val
170 | Gly | Gly | Leu | His | Arg
175 | Phe | Pro | Pro | Thr | Ser
180 |
| Ser | Leu | Arg | Gln | Arg
185 | Pro | Glu | Pro | Gln | Val
190 | Thr | Gly | Thr | Val | Gly
195 |
| Leu | His | Leu | Gly | Val
200 | Thr | Pro | Ser | Val | Ile
205 | Arg | Lys | Arg | Tyr | Asn
210 |
| Leu | Thr | Ser | Gln | Asp
215 | Val | Gly | Ser | Gly | Thr
220 | Ser | Asn | Asn | Ser | Gln
225 |
| Ala | Cys | Ala | Gln | Phe
230 | Leu | Glu | Gln | Tyr | Phe
235 | His | Asp | Ser | Asp | Leu
240 |
| Ala | Gln | Phe | Met | Arg
245 | Leu | Phe | Gly | Gly | Asn
250 | Phe | Ala | His | Gln | Ala
255 |
| Ser | Val | Ala | Arg | Val
260 | Val | Gly | Gln | Gln | Gly
265 | Arg | Gly | Arg | Ala | Gly
270 |
| Ile | Glu | Ala | Ser | Leu
275 | Asp | Val | Gln | Tyr | Leu
280 | Met | Ser | Ala | Gly | Ala
285 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ile | Ser | Thr | Trp | Val | Tyr | Ser | Ser | Pro | Gly | Arg | His | Glu | Gly |
| | | | | 290 | | | | | 295 | | | | | 300 |
| Gln | Glu | Pro | Phe | Leu | Gln | Trp | Leu | Met | Leu | Leu | Ser | Asn | Glu | Ser |
| | | | | 305 | | | | | 310 | | | | | 315 |
| Ala | Leu | Pro | His | Val | His | Thr | Val | Ser | Tyr | Gly | Asp | Asp | Glu | Asp |
| | | | | 320 | | | | | 325 | | | | | 330 |
| Ser | Leu | Ser | Ser | Ala | Tyr | Ile | Gln | Arg | Val | Asn | Thr | Glu | Leu | Met |
| | | | | 335 | | | | | 340 | | | | | 345 |
| Lys | Ala | Ala | Ala | Arg | Gly | Leu | Thr | Leu | Leu | Phe | Ala | Ser | Gly | Asp |
| | | | | 350 | | | | | 355 | | | | | 360 |
| Ser | Gly | Ala | Gly | Cys | Trp | Ser | Val | Ser | Gly | Arg | His | Gln | Phe | Arg |
| | | | | 365 | | | | | 370 | | | | | 375 |
| Pro | Thr | Phe | Pro | Ala | Ser | Ser | Pro | Tyr | Val | Thr | Thr | Val | Gly | Gly |
| | | | | 380 | | | | | 385 | | | | | 390 |
| Thr | Ser | Phe | Gln | Glu | Pro | Phe | Leu | Ile | Thr | Asn | Glu | Ile | Val | Asp |
| | | | | 395 | | | | | 400 | | | | | 405 |
| Tyr | Ile | Ser | Gly | Gly | Gly | Phe | Ser | Asn | Val | Phe | Pro | Arg | Pro | Ser |
| | | | | 410 | | | | | 415 | | | | | 420 |
| Tyr | Gln | Glu | Glu | Ala | Val | Thr | Lys | Phe | Leu | Ser | Ser | Ser | Pro | His |
| | | | | 425 | | | | | 430 | | | | | 435 |
| Leu | Pro | Pro | Ser | Ser | Tyr | Phe | Asn | Ala | Ser | Gly | Arg | Ala | Tyr | Pro |
| | | | | 440 | | | | | 445 | | | | | 450 |
| Asp | Val | Ala | Ala | Leu | Ser | Asp | Gly | Tyr | Trp | Val | Val | Ser | Asn | Arg |
| | | | | 455 | | | | | 460 | | | | | 465 |
| Val | Pro | Ile | Pro | Trp | Val | Ser | Gly | Thr | Ser | Ala | Ser | Thr | Pro | Val |
| | | | | 470 | | | | | 475 | | | | | 480 |
| Phe | Gly | Gly | Ile | Leu | Ser | Leu | Ile | Asn | Glu | His | Arg | Ile | Leu | Ser |
| | | | | 485 | | | | | 490 | | | | | 495 |
| Gly | Arg | Pro | Pro | Leu | Gly | Phe | Leu | Asn | Pro | Arg | Leu | Tyr | Gln | Gln |
| | | | | 500 | | | | | 505 | | | | | 510 |
| His | Gly | Ala | Gly | Leu | Phe | Asp | Val | Thr | Arg | Gly | Cys | His | Glu | Ser |
| | | | | 515 | | | | | 520 | | | | | 525 |
| Cys | Leu | Asp | Glu | Glu | Val | Glu | Gly | Gln | Gly | Phe | Cys | Ser | Gly | Pro |
| | | | | 530 | | | | | 535 | | | | | 540 |
| Gly | Trp | Asp | Pro | Val | Thr | Gly | Trp | Gly | Thr | Pro | Thr | Ser | Gln | Leu |
| | | | | 545 | | | | | 550 | | | | | 555 |

ttggcatttt ttcagggcac cagtgggtgg acatgaatgg ttccccacag 1150
 gatttcaacg tggctgtcag aatcactcct ctcaaatatg cccagatttg 1200
 ctattggatt aaaggaaact acctggattg tagggagggg tgacacagtg 1250
 ttcctcctg gcagcaatta agggctcttca tgttcttatt ttaggagagg 1300
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 tgtgtgtaag gtgtcttata atcttttacc tatttcttac aattgcaaga 1400
 tgactggctt tactatttga aaactgggtt gtgtatcata tcatatatca 1450
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 tttggggcaa tgaggaatat ttgacaatta agttaatctt cacgtttttg 1550
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<210> 261

<211> 383

<212> PRT

<213> Homo Sapien

<400> 261

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Gly | Ile | Pro | Gly | Leu | Leu | Phe | Leu | Leu | Phe | Phe | Leu | Leu |
| 1 | | | | 5 | | | | 10 | | | | | 15 | |
| Cys | Ala | Val | Gly | Gln | Val | Ser | Pro | Tyr | Ser | Ala | Pro | Trp | Lys | Pro |
| | | | | 20 | | | | | 25 | | | | 30 | |
| Thr | Trp | Pro | Ala | Tyr | Arg | Leu | Pro | Val | Val | Leu | Pro | Gln | Ser | Thr |
| | | | | 35 | | | | | 40 | | | | 45 | |
| Leu | Asn | Leu | Ala | Lys | Pro | Asp | Phe | Gly | Ala | Glu | Ala | Lys | Leu | Glu |
| | | | | 50 | | | | | 55 | | | | 60 | |
| Val | Ser | Ser | Ser | Cys | Gly | Pro | Gln | Cys | His | Lys | Gly | Thr | Pro | Leu |
| | | | | 65 | | | | | 70 | | | | 75 | |
| Pro | Thr | Tyr | Glu | Glu | Ala | Lys | Gln | Tyr | Leu | Ser | Tyr | Glu | Thr | Leu |
| | | | | 80 | | | | | 85 | | | | 90 | |
| Tyr | Ala | Asn | Gly | Ser | Arg | Thr | Glu | Thr | Gln | Val | Gly | Ile | Tyr | Ile |
| | | | | 95 | | | | | 100 | | | | 105 | |
| Leu | Ser | Ser | Ser | Gly | Asp | Gly | Ala | Gln | His | Arg | Asp | Ser | Gly | Ser |
| | | | | 110 | | | | | 115 | | | | 120 | |

| | | | | |
|-----------------|---|-----|-----|-----|
| Ser Gly Lys Ser | Arg Arg Lys Arg Gln Ile Tyr Gly Tyr Asp Ser | 125 | 130 | 135 |
| Arg Phe Ser Ile | Phe Gly Lys Asp Phe Leu Leu Asn Tyr Pro Phe | 140 | 145 | 150 |
| Ser Thr Ser Val | Lys Leu Ser Thr Gly Cys Thr Gly Thr Leu Val | 155 | 160 | 165 |
| Ala Glu Lys His | Val Leu Thr Ala Ala His Cys Ile His Asp Gly | 170 | 175 | 180 |
| Lys Thr Tyr Val | Lys Gly Thr Gln Lys Leu Arg Val Gly Phe Leu | 185 | 190 | 195 |
| Lys Pro Lys Phe | Lys Asp Gly Gly Arg Gly Ala Asn Asp Ser Thr | 200 | 205 | 210 |
| Ser Ala Met Pro | Glu Gln Met Lys Phe Gln Trp Ile Arg Val Lys | 215 | 220 | 225 |
| Arg Thr His Val | Pro Lys Gly Trp Ile Lys Gly Asn Ala Asn Asp | 230 | 235 | 240 |
| Ile Gly Met Asp | Tyr Asp Tyr Ala Leu Leu Glu Leu Lys Lys Pro | 245 | 250 | 255 |
| His Lys Arg Lys | Phe Met Lys Ile Gly Val Ser Pro Pro Ala Lys | 260 | 265 | 270 |
| Gln Leu Pro Gly | Gly Arg Ile His Phe Ser Gly Tyr Asp Asn Asp | 275 | 280 | 285 |
| Arg Pro Gly Asn | Leu Val Tyr Arg Phe Cys Asp Val Lys Asp Glu | 290 | 295 | 300 |
| Thr Tyr Asp Leu | Leu Tyr Gln Gln Cys Asp Ala Gln Pro Gly Ala | 305 | 310 | 315 |
| Ser Gly Ser Gly | Val Tyr Val Arg Met Trp Lys Arg Gln Gln Gln | 320 | 325 | 330 |
| Lys Trp Glu Arg | Lys Ile Ile Gly Ile Phe Ser Gly His Gln Trp | 335 | 340 | 345 |
| Val Asp Met Asn | Gly Ser Pro Gln Asp Phe Asn Val Ala Val Arg | 350 | 355 | 360 |
| Ile Thr Pro Leu | Lys Tyr Ala Gln Ile Cys Tyr Trp Ile Lys Gly | 365 | 370 | 375 |
| Asn Tyr Leu Asp | Cys Arg Glu Gly | 380 | | |

<210> 262
 <211> 1378
 <212> DNA
 <213> Homo Sapien

<400> 262
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 caggatacct gttccccag cctgtgggaa gccccagcag ctgaaccggg 200
 ttgtggggcg cgaggacagc actgacagcg agtggccctg gatcgtgagc 250
 atccagaaga atgggacca ccaactgcgc ggttctctgc tcaccagccg 300
 ctgggtgatc actgctgccc actgtttcaa ggacaacctg aacaaaccat 350
 acctgtttct tgtgctgctg ggggcctggc agctggggaa ccctggctct 400
 cggctccaga aggtgggtgt tgctgggtg gagccccacc ctgtgtattc 450
 ctggaaggaa ggtgcctgtg cagacattgc cctggtgcgt ctgcagcgct 500
 ccatacagtt ctgcagagcg gtctgccc tctgcctacc tgatgcctct 550
 atccacctcc ctccaaacac ccaactgctg atctcaggct gggggagcat 600
 ccaagatgga gttcccttgc cccaccctca gaccctgcag aagctgaagg 650
 ttctatcat cgactcgga gtctgcagcc atctgtactg gcggggagca 700
 ggacagggac ccatcactga ggacatgctg tgtgccggct acttgagggg 750
 ggagcgggat gcttgtctgg gcgactccgg gggccccctc atgtgccagg 800
 tggacggcgc ctggctgctg gccggcatca tcagctgggg cgagggctgt 850
 gccgagcgca acaggccccg ggtctacatc agcctctctg cgcaccgctc 900
 ctgggtggag aagatcgtgc aaggggtgca gctccgcggg cgcgctcagg 950
 ggggtggggc cctcagggca ccgagccagg gctctggggc cgccgcgcgc 1000
 tctagggcg cagcgggacg cggggctcgg atctgaaagg cggccagatc 1050
 cacatctgga tctggatctg cggcggcctc gggcggtttc cccgcctgta 1100
 aataggctca tctacctcta cctctggggg cccggacggc tgctgcggaa 1150

| | | | |
|---|-----|-----|-----|
| Gly Ser Ile Gln Asp Gly Val Pro Leu Pro His Pro Gln Thr Leu | 185 | 190 | 195 |
| Gln Lys Leu Lys Val Pro Ile Ile Asp Ser Glu Val Cys Ser His | 200 | 205 | 210 |
| Leu Tyr Trp Arg Gly Ala Gly Gln Gly Pro Ile Thr Glu Asp Met | 215 | 220 | 225 |
| Leu Cys Ala Gly Tyr Leu Glu Gly Glu Arg Asp Ala Cys Leu Gly | 230 | 235 | 240 |
| Asp Ser Gly Gly Pro Leu Met Cys Gln Val Asp Gly Ala Trp Leu | 245 | 250 | 255 |
| Leu Ala Gly Ile Ile Ser Trp Gly Glu Gly Cys Ala Glu Arg Asn | 260 | 265 | 270 |
| Arg Pro Gly Val Tyr Ile Ser Leu Ser Ala His Arg Ser Trp Val | 275 | 280 | 285 |
| Glu Lys Ile Val Gln Gly Val Gln Leu Arg Gly Arg Ala Gln Gly | 290 | 295 | 300 |
| Gly Gly Ala Leu Arg Ala Pro Ser Gln Gly Ser Gly Ala Ala Ala | 305 | 310 | 315 |

Arg Ser

<210> 264

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 264

gtccgcaagg atgcctacat gttc 24

<210> 265

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 265

gcagaggtgt ctaaggttg 19

<210> 266

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 266

agctctagac caatgccagc ttcc 24

<210> 267

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 267

gccaccaact cctgcaagaa cttctcagaa ctgcccctgg tcatg 45

<210> 268

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 268

ggggaattca ccctatgaca ttgcc 25

<210> 269

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 269

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<210> 270

<211> 50

<212> DNA

<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

<400> 270

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<223> Synthetic Oligonucleotide Probe

<400> 280

ttacagtgcc ccctggaaac ccacttggcc tgcataccgc ctccc 45

<210> 281

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 281

cgtctcgagc gctccataca gttcccttgc ccca 34

<210> 282

<211> 61

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 282

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tgccaggtgg a 61

<210> 283

<211> 119

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 283

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gcagccatct gtactggcgg ggagcaggac agggacccat cactgaggac 100

atgctgtgtg ccggctact 119

<210> 284

<211> 1875

<212> DNA

<213> Homo Sapien

<400> 284

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ttctgaatgg gataccactc aaaggggtgaa gaggtcagct gtcctcctgt 1450
 catcttcccc accctgtccc cagcccctaa acaagatact tcttggttaa 1500
 ggccctccgg aagggaaagg ctacggggca tgtgcctcat cacaccatcc 1550
 atcctggagg cacaaggcct ggctggctgc gagctcagga ggccgcctga 1600
 ggactgcaca ccggggccac acctctcctg cccctccctc ctgagtcctg 1650
 ggggtgggag gatttgaggg agctcactgc ctacctggcc tggggctgtc 1700
 tgccacaca gcatgtgcg tctccctgag tgctgtgta gctggggatg 1750
 gggattccta ggggcagatg aaggacaagc cccactggag tggggttctt 1800
 tgagtggggg aggcaggac gagggaagga aagtaactcc tgactctcca 1850
 ataaaaacct gtccaacctg tgaaa 1875

<210> 285

<211> 463

<212> PRT

<213> Homo Sapien

<400> 285

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|--|
| Met | His | Gly | Ser | Cys | Ser | Phe | Leu | Met | Leu | Leu | Leu | Pro | Leu | Leu | | | | | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | | | | |
| Leu | Leu | Leu | Val | Ala | Thr | Thr | Gly | Pro | Val | Gly | Ala | Leu | Thr | Asp | | | | | |
| | | | | 20 | | | | | 25 | | | | | 30 | | | | | |
| Glu | Glu | Lys | Arg | Leu | Met | Val | Glu | Leu | His | Asn | Leu | Tyr | Arg | Ala | | | | | |
| | | | | 35 | | | | | 40 | | | | | 45 | | | | | |
| Gln | Val | Ser | Pro | Thr | Ala | Ser | Asp | Met | Leu | His | Met | Arg | Trp | Asp | | | | | |
| | | | | 50 | | | | | 55 | | | | | 60 | | | | | |
| Glu | Glu | Leu | Ala | Ala | Phe | Ala | Lys | Ala | Tyr | Ala | Arg | Gln | Cys | Val | | | | | |
| | | | | 65 | | | | | 70 | | | | | 75 | | | | | |
| Trp | Gly | His | Asn | Lys | Glu | Arg | Gly | Arg | Arg | Gly | Glu | Asn | Leu | Phe | | | | | |
| | | | | 80 | | | | | 85 | | | | | 90 | | | | | |
| Ala | Ile | Thr | Asp | Glu | Gly | Met | Asp | Val | Pro | Leu | Ala | Met | Glu | Glu | | | | | |
| | | | | 95 | | | | | 100 | | | | | 105 | | | | | |
| Trp | His | His | Glu | Arg | Glu | His | Tyr | Asn | Leu | Ser | Ala | Ala | Thr | Cys | | | | | |
| | | | | 110 | | | | | 115 | | | | | 120 | | | | | |
| Ser | Pro | Gly | Gln | Met | Cys | Gly | His | Tyr | Thr | Gln | Val | Val | Trp | Ala | | | | | |
| | | | | 125 | | | | | 130 | | | | | 135 | | | | | |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|
| Lys | Thr | Glu | Arg | Ile
140 | Gly | Cys | Gly | Ser | His
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160 | Leu | Val | Cys | Asn | Tyr
165 |
| Glu | Pro | Pro | Gly | Asn
170 | Val | Lys | Gly | Lys | Arg
175 | Pro | Tyr | Gln | Glu | Gly
180 |
| Thr | Pro | Cys | Ser | Gln
185 | Cys | Pro | Ser | Gly | Tyr
190 | His | Cys | Lys | Asn | Ser
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| Leu | Cys | Glu | Pro | Ile
200 | Gly | Ser | Pro | Glu | Asp
205 | Ala | Gln | Asp | Leu | Pro
210 |
| Tyr | Leu | Val | Thr | Glu
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| Asp | Ser | Arg | Lys | Met
230 | Gly | Thr | Pro | Ser | Ser
235 | Leu | Ala | Thr | Gly | Ile
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| Pro | Ala | Phe | Leu | Val
245 | Thr | Glu | Val | Ser | Gly
250 | Ser | Leu | Ala | Thr | Lys
255 |
| Ala | Leu | Pro | Ala | Val
260 | Glu | Thr | Gln | Ala | Pro
265 | Thr | Ser | Leu | Ala | Thr
270 |
| Lys | Asp | Pro | Pro | Ser
275 | Met | Ala | Thr | Glu | Ala
280 | Pro | Pro | Cys | Val | Thr
285 |
| Thr | Glu | Val | Pro | Ser
290 | Ile | Leu | Ala | Ala | His
295 | Ser | Leu | Pro | Ser | Leu
300 |
| Asp | Glu | Glu | Pro | Val
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| Pro | Lys | Ser | Ala | Asp
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330 |
| Arg | Ser | Pro | Glu | Asn
335 | Ser | Leu | Asp | Pro | Lys
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345 |
| Ala | Arg | Glu | Leu | Leu
350 | Pro | His | Ala | Gln | Glu
355 | Glu | Ala | Glu | Ala | Glu
360 |
| Ala | Glu | Leu | Pro | Pro
365 | Ser | Ser | Glu | Val | Leu
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375 |
| Ala | Gln | Asp | Lys | Pro
380 | Gly | Glu | Leu | Gln | Ala
385 | Thr | Leu | Asp | His | Thr
390 |
| Gly | His | Thr | Ser | Ser
395 | Lys | Ser | Leu | Pro | Asn
400 | Phe | Pro | Asn | Thr | Ser
405 |

Ala Thr Ala Asn Ala Thr Gly Gly Arg Ala Leu Ala Leu Gln Ser
410 415 420

Ser Leu Pro Gly Ala Glu Gly Pro Asp Lys Pro Ser Val Val Ser
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Gly Leu Asn Ser Gly Pro Gly His Val Trp Gly Pro Leu Leu Gly
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<211> 1059

<212> PRT

<213> Homo Sapien

<400> 290

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| Met | Val | Asp | Val | Leu | Leu | Leu | Phe | Ser | Leu | Cys | Leu | Leu | Phe | His |
| 1 | | | | 5 | | | | | 10 | | | | 15 | |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ser | Arg | Pro | Asp | Leu | Ser | His | Asn | Arg | Leu | Ser | Phe | Ile | Lys |
| | | | | 20 | | | | 25 | | | | | 30 | |

| | | | | | | | | | | | | | | | | | | |
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315 | | | | |
| Glu | Asp | Met | Asn | Gly
320 | Ala | Phe | Ser | Gly | Leu | Asp | Lys | Leu | Arg | Arg
330 | | | | |
| Leu | Ile | Leu | Gln | Gly
335 | Asn | Arg | Ile | Arg | Ser | Ile | Thr | Lys | Lys | Ala
345 | | | | |
| Phe | Thr | Gly | Leu | Asp
350 | Ala | Leu | Glu | His | Leu | Asp | Leu | Ser | Asp | Asn
360 | | | | |
| Ala | Ile | Met | Ser | Leu
365 | Gln | Gly | Asn | Ala | Phe | Ser | Gln | Met | Lys | Lys
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| Leu | Gln | Gln | Leu | His
380 | Leu | Asn | Thr | Ser | Ser | Leu | Leu | Cys | Asp | Cys
390 | | | | |
| Gln | Leu | Lys | Trp | Leu
395 | Pro | Gln | Trp | Val | Ala | Glu | Asn | Asn | Phe | Gln
405 | | | | |
| Ser | Phe | Val | Asn | Ala
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| Arg | Ser | Ile | Phe | Ala
425 | Val | Ser | Pro | Asp | Gly | Phe | Val | Cys | Asp | Asp
435 | | | | |
| Phe | Pro | Lys | Pro | Gln
440 | Ile | Thr | Val | Gln | Pro | Glu | Thr | Gln | Ser | Ala
450 | | | | |
| Ile | Lys | Gly | Ser | Asn
455 | Leu | Ser | Phe | Ile | Cys | Ser | Ala | Ala | Ser | Ser
465 | | | | |
| Ser | Asp | Ser | Pro | Met
470 | Thr | Phe | Ala | Trp | Lys | Lys | Asp | Asn | Glu | Leu
480 | | | | |
| Leu | His | Asp | Ala | Glu
485 | Met | Glu | Asn | Tyr | Ala | His | Leu | Arg | Ala | Gln
495 | | | | |
| Gly | Gly | Glu | Val | Met
500 | Glu | Tyr | Thr | Thr | Ile | Leu | Arg | Leu | Arg | Glu
510 | | | | |
| Val | Glu | Phe | Ala | Ser
515 | Glu | Gly | Lys | Tyr | Gln | Cys | Val | Ile | Ser | Asn
525 | | | | |
| His | Phe | Gly | Ser | Ser
530 | Tyr | Ser | Val | Lys | Ala | Lys | Leu | Thr | Val | Asn
540 | | | | |
| Met | Leu | Pro | Ser | Phe
545 | Thr | Lys | Thr | Pro | Met | Asp | Leu | Thr | Ile | Arg
555 | | | | |

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 Cys His Ile Asp Asn Ser Ser Glu Ala Asp Val Glu Ala Ala Thr
 845 850 855
 Asp Leu Phe Leu Cys Pro Phe Leu Gly Ser Thr Gly Pro Met Tyr
 860 865 870
 Leu Lys Gly Asn Val Tyr Gly Ser Asp Pro Phe Glu Thr Tyr His
 875 880 885
 Thr Gly Cys Ser Pro Asp Pro Arg Thr Val Leu Met Asp His Tyr
 890 895 900
 Glu Pro Ser Tyr Ile Lys Lys Lys Glu Cys Tyr Pro Cys Ser His
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 Pro Ser Glu Glu Ser Cys Glu Arg Ser Phe Ser Asn Ile Ser Trp
 920 925 930
 Pro Ser His Val Arg Lys Leu Leu Asn Thr Ser Tyr Ser His Asn
 935 940 945
 Glu Gly Pro Gly Met Lys Asn Leu Cys Leu Asn Lys Ser Ser Leu
 950 955 960
 Asp Phe Ser Ala Asn Pro Glu Pro Ala Ser Val Ala Ser Ser Asn
 965 970 975
 Ser Phe Met Gly Thr Phe Gly Lys Ala Leu Arg Arg Pro His Leu
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 Asp Ala Tyr Ser Ser Phe Gly Gln Pro Ser Asp Cys Gln Pro Arg
 995 1000 1005
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<212> PRT

<213> Homo Sapien

<400> 292

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| Pro | Arg | Phe | Asn | Arg | Ala | Leu | Phe | Asp | Pro | Leu | Leu | Val | Val | Leu |
| | | | | 20 | | | | | 25 | | | | | 30 |
| Leu | Ala | Leu | Gln | Leu | Leu | Val | Val | Ala | Gly | Leu | Val | Arg | Ala | Gln |
| | | | | 35 | | | | | 40 | | | | | 45 |
| Thr | Cys | Pro | Ser | Val | Cys | Ser | Cys | Ser | Asn | Gln | Phe | Ser | Lys | Val |
| | | | | 50 | | | | | 55 | | | | | 60 |
| Ile | Cys | Val | Arg | Lys | Asn | Leu | Arg | Glu | Val | Pro | Asp | Gly | Ile | Ser |
| | | | | 65 | | | | | 70 | | | | | 75 |
| Thr | Asn | Thr | Arg | Leu | Leu | Asn | Leu | His | Glu | Asn | Gln | Ile | Gln | Ile |
| | | | | 80 | | | | | 85 | | | | | 90 |
| Ile | Lys | Val | Asn | Ser | Phe | Lys | His | Leu | Arg | His | Leu | Glu | Ile | Leu |
| | | | | 95 | | | | | 100 | | | | | 105 |
| Gln | Leu | Ser | Arg | Asn | His | Ile | Arg | Thr | Ile | Glu | Ile | Gly | Ala | Phe |
| | | | | 110 | | | | | 115 | | | | | 120 |
| Asn | Gly | Leu | Ala | Asn | Leu | Asn | Thr | Leu | Glu | Leu | Phe | Asp | Asn | Arg |
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| Leu | Thr | Thr | Ile | Pro | Asn | Gly | Ala | Phe | Val | Tyr | Leu | Ser | Lys | Leu |
| | | | | 140 | | | | | 145 | | | | | 150 |
| Lys | Glu | Leu | Trp | Leu | Arg | Asn | Asn | Pro | Ile | Glu | Ser | Ile | Pro | Ser |

| | | | | | |
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| | 155 | | 160 | | 165 |
| Tyr Ala Phe Asn Arg Ile Pro Ser Leu Arg Arg Leu Asp Leu Gly | | | | | |
| | 170 | | 175 | | 180 |
| Glu Leu Lys Arg Leu Ser Tyr Ile Ser Glu Gly Ala Phe Glu Gly | | | | | |
| | 185 | | 190 | | 195 |
| Leu Ser Asn Leu Arg Tyr Leu Asn Leu Ala Met Cys Asn Leu Arg | | | | | |
| | 200 | | 205 | | 210 |
| Glu Ile Pro Asn Leu Thr Pro Leu Ile Lys Leu Asp Glu Leu Asp | | | | | |
| | 215 | | 220 | | 225 |
| Leu Ser Gly Asn His Leu Ser Ala Ile Arg Pro Gly Ser Phe Gln | | | | | |
| | 230 | | 235 | | 240 |
| Gly Leu Met His Leu Gln Lys Leu Trp Met Ile Gln Ser Gln Ile | | | | | |
| | 245 | | 250 | | 255 |
| Gln Val Ile Glu Arg Asn Ala Phe Asp Asn Leu Gln Ser Leu Val | | | | | |
| | 260 | | 265 | | 270 |
| Glu Ile Asn Leu Ala His Asn Asn Leu Thr Leu Leu Pro His Asp | | | | | |
| | 275 | | 280 | | 285 |
| Leu Phe Thr Pro Leu His His Leu Glu Arg Ile His Leu His His | | | | | |
| | 290 | | 295 | | 300 |
| Asn Pro Trp Asn Cys Asn Cys Asp Ile Leu Trp Leu Ser Trp Trp | | | | | |
| | 305 | | 310 | | 315 |
| Ile Lys Asp Met Ala Pro Ser Asn Thr Ala Cys Cys Ala Arg Cys | | | | | |
| | 320 | | 325 | | 330 |
| Asn Thr Pro Pro Asn Leu Lys Gly Arg Tyr Ile Gly Glu Leu Asp | | | | | |
| | 335 | | 340 | | 345 |
| Gln Asn Tyr Phe Thr Cys Tyr Ala Pro Val Ile Val Glu Pro Pro | | | | | |
| | 350 | | 355 | | 360 |
| Ala Asp Leu Asn Val Thr Glu Gly Met Ala Ala Glu Leu Lys Cys | | | | | |
| | 365 | | 370 | | 375 |
| Arg Ala Ser Thr Ser Leu Thr Ser Val Ser Trp Ile Thr Pro Asn | | | | | |
| | 380 | | 385 | | 390 |
| Gly Thr Val Met Thr His Gly Ala Tyr Lys Val Arg Ile Ala Val | | | | | |
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| Leu Ser Asp Gly Thr Leu Asn Phe Thr Asn Val Thr Val Gln Asp | | | | | |
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| | | |
|-----------------|---------------------|-----------------------------|
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| Thr Ala Ser Ala | Thr Leu Asn Val Thr | Ala Ala Thr Thr Thr Pro |
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| Phe Ser Tyr Phe | Ser Thr Val Thr Val | Glu Thr Met Glu Pro Ser |
| 455 | | 460 465 |
| Gln Asp Glu Ala | Arg Thr Thr Asp Asn | Asn Val Gly Pro Thr Pro |
| 470 | | 475 480 |
| Val Val Asp Trp | Glu Thr Thr Asn Val | Thr Thr Ser Leu Thr Pro |
| 485 | | 490 495 |
| Gln Ser Thr Arg | Ser Thr Glu Lys Thr | Phe Thr Ile Pro Val Thr |
| 500 | | 505 510 |
| Asp Ile Asn Ser | Gly Ile Pro Gly Ile | Asp Glu Val Met Lys Thr |
| 515 | | 520 525 |
| Thr Lys Ile Ile | Ile Gly Cys Phe Val | Ala Ile Thr Leu Met Ala |
| 530 | | 535 540 |
| Ala Val Met Leu | Val Ile Phe Tyr Lys | Met Arg Lys Gln His His |
| 545 | | 550 555 |
| Arg Gln Asn His | His Ala Pro Thr Arg | Thr Val Glu Ile Ile Asn |
| 560 | | 565 570 |
| Val Asp Asp Glu | Ile Thr Gly Asp Thr | Pro Met Glu Ser His Leu |
| 575 | | 580 585 |
| Pro Met Pro Ala | Ile Glu His Glu His | Leu Asn His Tyr Asn Ser |
| 590 | | 595 600 |
| Tyr Lys Ser Pro | Phe Asn His Thr Thr | Thr Val Asn Thr Ile Asn |
| 605 | | 610 615 |
| Ser Ile His Ser | Ser Val His Glu Pro | Leu Leu Ile Arg Met Asn |
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<212> DNA

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| cagctggacc | ataacaacct | aacagagatt | accaaaggct | ggctttacgg | 1100 |
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 acatagactg aatgagacca aaggaaaagc ttaacatact acctcaagtg 3650
 aacttttatt taaaagagag agaattctat gttttttaaa tggagttatg 3700
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 aaattaatga tataaatcat gattatttta tgtattttta taatgccaga 3900
 tttcttttta tggaaaatga gttactaaag cattttaaat aataacctgcc 3950
 ttgtaccatt ttttaaatag aagtacttc attatatttt gcacattata 4000

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aaa 4053

<210> 294

<211> 1119

<212> PRT

<213> Homo Sapien

<400> 294

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Met | Ser | Ala | Pro | Ser | Leu | Arg | Ala | Arg | Ala | Ala | Gly | Leu | Gly | Leu | 1 | 5 | 10 | 15 |
| Leu | Leu | Cys | Ala | Val | Leu | Gly | Arg | Ala | Gly | Arg | Ser | Asp | Ser | Gly | 20 | 25 | 30 | |
| Gly | Arg | Gly | Glu | Leu | Gly | Gln | Pro | Ser | Gly | Val | Ala | Ala | Glu | Arg | 35 | 40 | 45 | |
| Pro | Cys | Pro | Thr | Thr | Cys | Arg | Cys | Leu | Gly | Asp | Leu | Leu | Asp | Cys | 50 | 55 | 60 | |
| Ser | Arg | Lys | Arg | Leu | Ala | Arg | Leu | Pro | Glu | Pro | Leu | Pro | Ser | Trp | 65 | 70 | 75 | |
| Val | Ala | Arg | Leu | Asp | Leu | Ser | His | Asn | Arg | Leu | Ser | Phe | Ile | Lys | 80 | 85 | 90 | |
| Ala | Ser | Ser | Met | Ser | His | Leu | Gln | Ser | Leu | Arg | Glu | Val | Lys | Leu | 95 | 100 | 105 | |
| Asn | Asn | Asn | Glu | Leu | Glu | Thr | Ile | Pro | Asn | Leu | Gly | Pro | Val | Ser | 110 | 115 | 120 | |
| Ala | Asn | Ile | Thr | Leu | Leu | Ser | Leu | Ala | Gly | Asn | Arg | Ile | Val | Glu | 125 | 130 | 135 | |
| Ile | Leu | Pro | Glu | His | Leu | Lys | Glu | Phe | Gln | Ser | Leu | Glu | Thr | Leu | 140 | 145 | 150 | |
| Asp | Leu | Ser | Ser | Asn | Asn | Ile | Ser | Glu | Leu | Gln | Thr | Ala | Phe | Pro | 155 | 160 | 165 | |
| Ala | Leu | Gln | Leu | Lys | Tyr | Leu | Tyr | Leu | Asn | Ser | Asn | Arg | Val | Thr | 170 | 175 | 180 | |
| Ser | Met | Glu | Pro | Gly | Tyr | Phe | Asp | Asn | Leu | Ala | Asn | Thr | Leu | Leu | 185 | 190 | 195 | |
| Val | Leu | Lys | Leu | Asn | Arg | Asn | Arg | Ile | Ser | Ala | Ile | Pro | Pro | Lys | 200 | 205 | 210 | |
| Met | Phe | Lys | Leu | Pro | Gln | Leu | Gln | His | Leu | Glu | Leu | Asn | Arg | Asn | | | | |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|
| | | | | 215 | | | | | 220 | | | | | 225 |
| Lys | Ile | Lys | Asn | Val
230 | Asp | Gly | Leu | Thr | Phe
235 | Gln | Gly | Leu | Gly | Ala
240 |
| Leu | Lys | Ser | Leu | Lys
245 | Met | Gln | Arg | Asn | Gly
250 | Val | Thr | Lys | Leu | Met
255 |
| Asp | Gly | Ala | Phe | Trp
260 | Gly | Leu | Ser | Asn | Met
265 | Glu | Ile | Leu | Gln | Leu
270 |
| Asp | His | Asn | Asn | Leu
275 | Thr | Glu | Ile | Thr | Lys
280 | Gly | Trp | Leu | Tyr | Gly
285 |
| Leu | Leu | Met | Leu | Gln
290 | Glu | Leu | His | Leu | Ser
295 | Gln | Asn | Ala | Ile | Asn
300 |
| Arg | Ile | Ser | Pro | Asp
305 | Ala | Trp | Glu | Phe | Cys
310 | Gln | Lys | Leu | Ser | Glu
315 |
| Leu | Asp | Leu | Thr | Phe
320 | Asn | His | Leu | Ser | Arg
325 | Leu | Asp | Asp | Ser | Ser
330 |
| Phe | Leu | Gly | Leu | Ser
335 | Leu | Leu | Asn | Thr | Leu
340 | His | Ile | Gly | Asn | Asn
345 |
| Arg | Val | Ser | Tyr | Ile
350 | Ala | Asp | Cys | Ala | Phe
355 | Arg | Gly | Leu | Ser | Ser
360 |
| Leu | Lys | Thr | Leu | Asp
365 | Leu | Lys | Asn | Asn | Glu
370 | Ile | Ser | Trp | Thr | Ile
375 |
| Glu | Asp | Met | Asn | Gly
380 | Ala | Phe | Ser | Gly | Leu
385 | Asp | Lys | Leu | Arg | Arg
390 |
| Leu | Ile | Leu | Gln | Gly
395 | Asn | Arg | Ile | Arg | Ser
400 | Ile | Thr | Lys | Lys | Ala
405 |
| Phe | Thr | Gly | Leu | Asp
410 | Ala | Leu | Glu | His | Leu
415 | Asp | Leu | Ser | Asp | Asn
420 |
| Ala | Ile | Met | Ser | Leu
425 | Gln | Gly | Asn | Ala | Phe
430 | Ser | Gln | Met | Lys | Lys
435 |
| Leu | Gln | Gln | Leu | His
440 | Leu | Asn | Thr | Ser | Ser
445 | Leu | Leu | Cys | Asp | Cys
450 |
| Gln | Leu | Lys | Trp | Leu
455 | Pro | Gln | Trp | Val | Ala
460 | Glu | Asn | Asn | Phe | Gln
465 |
| Ser | Phe | Val | Asn | Ala
470 | Ser | Cys | Ala | His | Pro
475 | Gln | Leu | Leu | Lys | Gly
480 |

| | | |
|-----------------|-------------------------|-------------------------|
| Arg Ser Ile Phe | Ala Val Ser Pro Asp | Gly Phe Val Cys Asp Asp |
| 485 | | 490 495 |
| Phe Pro Lys Pro | Gln Ile Thr Val Gln Pro | Glu Thr Gln Ser Ala |
| 500 | | 505 510 |
| Ile Lys Gly Ser | Asn Leu Ser Phe Ile Cys | Ser Ala Ala Ser Ser |
| 515 | | 520 525 |
| Ser Asp Ser Pro | Met Thr Phe Ala Trp Lys | Lys Asp Asn Glu Leu |
| 530 | | 535 540 |
| Leu His Asp Ala | Glu Met Glu Asn Tyr Ala | His Leu Arg Ala Gln |
| 545 | | 550 555 |
| Gly Gly Glu Val | Met Glu Tyr Thr Thr Ile | Leu Arg Leu Arg Glu |
| 560 | | 565 570 |
| Val Glu Phe Ala | Ser Glu Gly Lys Tyr Gln | Cys Val Ile Ser Asn |
| 575 | | 580 585 |
| His Phe Gly Ser | Ser Tyr Ser Val Lys Ala | Lys Leu Thr Val Asn |
| 590 | | 595 600 |
| Met Leu Pro Ser | Phe Thr Lys Thr Pro Met | Asp Leu Thr Ile Arg |
| 605 | | 610 615 |
| Ala Gly Ala Met | Ala Arg Leu Glu Cys Ala | Ala Val Gly His Pro |
| 620 | | 625 630 |
| Ala Pro Gln Ile | Ala Trp Gln Lys Asp Gly | Gly Thr Asp Phe Pro |
| 635 | | 640 645 |
| Ala Ala Arg Glu | Arg Arg Met His Val Met | Pro Glu Asp Asp Val |
| 650 | | 655 660 |
| Phe Phe Ile Val | Asp Val Lys Ile Glu Asp | Ile Gly Val Tyr Ser |
| 665 | | 670 675 |
| Cys Thr Ala Gln | Asn Ser Ala Gly Ser Ile | Ser Ala Asn Ala Thr |
| 680 | | 685 690 |
| Leu Thr Val Leu | Glu Thr Pro Ser Phe Leu | Arg Pro Leu Leu Asp |
| 695 | | 700 705 |
| Arg Thr Val Thr | Lys Gly Glu Thr Ala Val | Leu Gln Cys Ile Ala |
| 710 | | 715 720 |
| Gly Gly Ser Pro | Pro Pro Lys Leu Asn Trp | Thr Lys Asp Asp Ser |
| 725 | | 730 735 |
| Pro Leu Val Val | Thr Glu Arg His Phe Phe | Ala Ala Gly Asn Gln |
| 740 | | 745 750 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|-------------|-----|-----|-----|-----|-------------|
| Leu | Leu | Ile | Ile | Val
755 | Asp | Ser | Asp | Val | Ser
760 | Asp | Ala | Gly | Lys | Tyr
765 |
| Thr | Cys | Glu | Met | Ser
770 | Asn | Thr | Leu | Gly | Thr
775 | Glu | Arg | Gly | Asn | Val
780 |
| Arg | Leu | Ser | Val | Ile
785 | Pro | Thr | Pro | Thr | Cys
790 | Asp | Ser | Pro | Gln | Met
795 |
| Thr | Ala | Pro | Ser | Leu
800 | Asp | Asp | Asp | Gly | Trp
805 | Ala | Thr | Val | Gly | Val
810 |
| Val | Ile | Ile | Ala | Val
815 | Val | Cys | Cys | Val | Val
820 | Gly | Thr | Ser | Leu | Val
825 |
| Trp | Val | Val | Ile | Ile
830 | Tyr | His | Thr | Arg | Arg
835 | Arg | Asn | Glu | Asp | Cys
840 |
| Ser | Ile | Thr | Asn | Thr
845 | Asp | Glu | Thr | Asn | Leu
850 | Pro | Ala | Asp | Ile | Pro
855 |
| Ser | Tyr | Leu | Ser | Ser
860 | Gln | Gly | Thr | Leu | Ala
865 | Asp | Arg | Gln | Asp | Gly
870 |
| Tyr | Val | Ser | Ser | Glu
875 | Ser | Gly | Ser | His | His
880 | Gln | Phe | Val | Thr | Ser
885 |
| Ser | Gly | Ala | Gly | Phe
890 | Phe | Leu | Pro | Gln | His
895 | Asp | Ser | Ser | Gly | Thr
900 |
| Cys | His | Ile | Asp | Asn
905 | Ser | Ser | Glu | Ala | Asp
910 | Val | Glu | Ala | Ala | Thr
915 |
| Asp | Leu | Phe | Leu | Cys
920 | Pro | Phe | Leu | Gly | Ser
925 | Thr | Gly | Pro | Met | Tyr
930 |
| Leu | Lys | Gly | Asn | Val
935 | Tyr | Gly | Ser | Asp | Pro
940 | Phe | Glu | Thr | Tyr | His
945 |
| Thr | Gly | Cys | Ser | Pro
950 | Asp | Pro | Arg | Thr | Val
955 | Leu | Met | Asp | His | Tyr
960 |
| Glu | Pro | Ser | Tyr | Ile
965 | Lys | Lys | Lys | Glu | Cys
970 | Tyr | Pro | Cys | Ser | His
975 |
| Pro | Ser | Glu | Glu | Ser
980 | Cys | Glu | Arg | Ser | Phe
985 | Ser | Asn | Ile | Ser | Trp
990 |
| Pro | Ser | His | Val | Arg
995 | Lys | Leu | Leu | Asn | Thr
1000 | Ser | Tyr | Ser | His | Asn
1005 |
| Glu | Gly | Pro | Gly | Met | Lys | Asn | Leu | Cys | Leu | Asn | Lys | Ser | Ser | Leu |

| 1010 | 1015 | 1020 |
|---|------|------|
| Asp Phe Ser Ala Asn Pro Glu Pro Ala Ser Val Ala Ser Ser Asn | | |
| 1025 | 1030 | 1035 |
| Ser Phe Met Gly Thr Phe Gly Lys Ala Leu Arg Arg Pro His Leu | | |
| 1040 | 1045 | 1050 |
| Asp Ala Tyr Ser Ser Phe Gly Gln Pro Ser Asp Cys Gln Pro Arg | | |
| 1055 | 1060 | 1065 |
| Ala Phe Tyr Leu Lys Ala His Ser Ser Pro Asp Leu Asp Ser Gly | | |
| 1070 | 1075 | 1080 |
| Ser Glu Glu Asp Gly Lys Glu Arg Thr Asp Phe Gln Glu Glu Asn | | |
| 1085 | 1090 | 1095 |
| His Ile Cys Thr Phe Lys Gln Thr Leu Glu Asn Tyr Arg Thr Pro | | |
| 1100 | 1105 | 1110 |
| Asn Phe Gln Ser Tyr Asp Leu Asp Thr | | |
| 1115 | | |

<210> 295

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 295

ggaaccgaat ctcagcta 18

<210> 296

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 296

cctaaactga actggacca 19

<210> 297

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 297
ggctggagac actgaacct 19

<210> 298
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 298
acagctgcac agctcagaac agtg 24

<210> 299

<211> 22
<212> DNA
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<220>
<223> Synthetic Oligonucleotide Probe

<400> 299
cattcccagt ataaaaattt tc 22

<210> 300
<211> 18
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<220>
<223> Synthetic Oligonucleotide Probe

<400> 300
gggtcttggt gaatgagg 18

<210> 301
<211> 24
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<220>
<223> Synthetic Oligonucleotide Probe

<400> 301
gtgcctctcg gttaccacca atgg 24

<210> 302
<211> 50
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 302

gcggccactg ttggaccgaa ctgtaaccaa gggagaaaca gccgtcctac 50

<210> 303

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 303

gcctttgaca accttcagtc actagtgg 28

<210> 304

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 304

cccatgtgt ccatgactgt tccc 24

<210> 305

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 305

tactgcctca tgacctcttc actcccttgc atcatcttag agcgg 45

<210> 306

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 306

actccaagga aatcgatcc gttc 24

<210> 307

<211> 24

<212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 307
 ttagcagctg aggatgggca caac 24

<210> 308
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 308
 actccaagga aatcggatcc gtgc 24

<210> 309
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 309
 gccttcactg gtttggatgc attggagcat ctagacctga gtgacaacgc 50

<210> 310
 <211> 3296
 <212> DNA
 <213> Homo Sapien

<400> 310
 caaaacttgc gtcgcgagga gcgcccagct tgacttgaat ggaaggagcc 50
 cgagcccgcg gagcgagct gagactgggg gagcgcggtc ggctgtggg 100
 gcgcccgtcg gcgcccgggc gcagcagggg aggggaagct gtggtctgcc 150
 ctgctccacg aggcgcact ggtgtgaacc gggagagccc ctgggtggtc 200
 ccgtccccta tccctccttt atatagaaac cttccacact gggaaggcag 250
 cggcgaggca ggagggtca tggtagcaa ggaggccggc tgatctgcag 300
 gcgcacagca ttccgagttt acagattttt acagatacca aatggaaggc 350
 gaggaggcag aacagcctgc ctggttccat cagccctggc gccagggcgc 400


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<210> 311
<211> 22
<212> DNA
<213> Artificial Sequence
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<400> 311
gcattggccg cgagactttg cc 22
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<220>
<223> Synthetic Oligonucleotide Probe

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<400> 312
gcggccacgg tccttggaaa tg 22
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<210> 313
<211> 45
<212> DNA
<213> Artificial Sequence
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<220>
<223> Synthetic Oligonucleotide Probe

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<400> 313
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<210> 314
<211> 3003
<212> DNA
<213> Homo Sapien
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<400> 314
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cgccgctgtc ctccgggagc ggcagcagta gcccgggcgg cgagggctgg 100
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gtagatccat ttttaatggt tcatttcctt tatggtcata taactgcaca 2800
 gctgaagatg aaaggggaaa ataaatgaaa attttacttt tcgatgccaa 2850
 tgatacattg cactaaactg atggaagaag ttatccaaag tactgtataa 2900
 catcttggtt attatttaat gttttctaaa ataaaaaatg ttagtggttt 2950
 tcctaatggc ctaataaaaa caattatttg taaataaaaa cactgttagt 3000
 at 3003

<210> 315

<211> 509

<212> PRT

<213> Homo Sapien

<400> 315

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Phe | Leu | Leu | Ala | Leu | Val | Leu | Val | Ser | Ser | Leu | Tyr | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 |
| Gln | Ala | Ala | Ala | Glu | Phe | Asp | Gly | Arg | Trp | Pro | Arg | Gln | Ile | Val |
| | | | | 20 | | | | | 25 | | | | | 30 |
| Ser | Ser | Ile | Gly | Leu | Cys | Arg | Tyr | Gly | Gly | Arg | Ile | Asp | Cys | Cys |
| | | | | 35 | | | | | 40 | | | | | 45 |
| Trp | Gly | Trp | Ala | Arg | Gln | Ser | Trp | Gly | Gln | Cys | Gln | Pro | Val | Cys |
| | | | | 50 | | | | | 55 | | | | | 60 |
| Gln | Pro | Arg | Cys | Lys | His | Gly | Glu | Cys | Ile | Gly | Pro | Asn | Lys | Cys |
| | | | | 65 | | | | | 70 | | | | | 75 |
| Lys | Cys | His | Pro | Gly | Tyr | Ala | Gly | Lys | Thr | Cys | Asn | Gln | Asp | Leu |
| | | | | 80 | | | | | 85 | | | | | 90 |
| Asn | Glu | Cys | Gly | Leu | Lys | Pro | Arg | Pro | Cys | Lys | His | Arg | Cys | Met |
| | | | | 95 | | | | | 100 | | | | | 105 |
| Asn | Thr | Tyr | Gly | Ser | Tyr | Lys | Cys | Tyr | Cys | Leu | Asn | Gly | Tyr | Met |
| | | | | 110 | | | | | 115 | | | | | 120 |
| Leu | Met | Pro | Asp | Gly | Ser | Cys | Ser | Ser | Ala | Leu | Thr | Cys | Ser | Met |
| | | | | 125 | | | | | 130 | | | | | 135 |
| Ala | Asn | Cys | Gln | Tyr | Gly | Cys | Asp | Val | Val | Lys | Gly | Gln | Ile | Arg |
| | | | | 140 | | | | | 145 | | | | | 150 |
| Cys | Gln | Cys | Pro | Ser | Pro | Gly | Leu | His | Leu | Ala | Pro | Asp | Gly | Arg |
| | | | | 155 | | | | | 160 | | | | | 165 |

00003740 07440 10110

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|
| Thr | Cys | Val | Asp | Val
170 | Asp | Glu | Cys | Ala | Thr
175 | Gly | Arg | Ala | Ser | Cys
180 |
| Pro | Arg | Phe | Arg | Gln
185 | Cys | Val | Asn | Thr | Phe
190 | Gly | Ser | Tyr | Ile | Cys
195 |
| Lys | Cys | His | Lys | Gly
200 | Phe | Asp | Leu | Met | Tyr
205 | Ile | Gly | Gly | Lys | Tyr
210 |
| Gln | Cys | His | Asp | Ile
215 | Asp | Glu | Cys | Ser | Leu
220 | Gly | Gln | Tyr | Gln | Cys
225 |
| Ser | Ser | Phe | Ala | Arg
230 | Cys | Tyr | Asn | Val | Arg
235 | Gly | Ser | Tyr | Lys | Cys
240 |
| Lys | Cys | Lys | Glu | Gly
245 | Tyr | Gln | Gly | Asp | Gly
250 | Leu | Thr | Cys | Val | Tyr
255 |
| Ile | Pro | Lys | Val | Met
260 | Ile | Glu | Pro | Ser | Gly
265 | Pro | Ile | His | Val | Pro
270 |
| Lys | Gly | Asn | Gly | Thr
275 | Ile | Leu | Lys | Gly | Asp
280 | Thr | Gly | Asn | Asn | Asn
285 |
| Trp | Ile | Pro | Asp | Val
290 | Gly | Ser | Thr | Trp | Trp
295 | Pro | Pro | Lys | Thr | Pro
300 |
| Tyr | Ile | Pro | Pro | Ile
305 | Ile | Thr | Asn | Arg | Pro
310 | Thr | Ser | Lys | Pro | Thr
315 |
| Thr | Arg | Pro | Thr | Pro
320 | Lys | Pro | Thr | Pro | Ile
325 | Pro | Thr | Pro | Pro | Pro
330 |
| Pro | Pro | Pro | Leu | Pro
335 | Thr | Glu | Leu | Arg | Thr
340 | Pro | Leu | Pro | Pro | Thr
345 |
| Thr | Pro | Glu | Arg | Pro
350 | Thr | Thr | Gly | Leu | Thr
355 | Thr | Ile | Ala | Pro | Ala
360 |
| Ala | Ser | Thr | Pro | Pro
365 | Gly | Gly | Ile | Thr | Val
370 | Asp | Asn | Arg | Val | Gln
375 |
| Thr | Asp | Pro | Gln | Lys
380 | Pro | Arg | Gly | Asp | Val
385 | Phe | Ser | Val | Leu | Val
390 |
| His | Ser | Cys | Asn | Phe
395 | Asp | His | Gly | Leu | Cys
400 | Gly | Trp | Ile | Arg | Glu
405 |
| Lys | Asp | Asn | Asp | Leu
410 | His | Trp | Glu | Pro | Ile
415 | Arg | Asp | Pro | Ala | Gly
420 |
| Gly | Gln | Tyr | Leu | Thr | Val | Ser | Ala | Ala | Lys | Ala | Pro | Gly | Gly | Lys |

| | | | | | |
|---|-----|--|-----|--|-----|
| | 425 | | 430 | | 435 |
| Ala Ala Arg Leu Val Leu Pro Leu Gly Arg Leu Met His Ser Gly | | | | | |
| | 440 | | 445 | | 450 |
| Asp Leu Cys Leu Ser Phe Arg His Lys Val Thr Gly Leu His Ser | | | | | |
| | 455 | | 460 | | 465 |
| Gly Thr Leu Gln Val Phe Val Arg Lys His Gly Ala His Gly Ala | | | | | |
| | 470 | | 475 | | 480 |
| Ala Leu Trp Gly Arg Asn Gly Gly His Gly Trp Arg Gln Thr Gln | | | | | |
| | 485 | | 490 | | 495 |
| Ile Thr Leu Arg Gly Ala Asp Ile Lys Ser Glu Ser Gln Arg | | | | | |
| | 500 | | 505 | | |

<210> 316

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 316

gatggttcct gctcaagtgc cctg 24

<210> 317

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 317

ttgcacttgt aggacccacg tacg 24

<210> 318

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 318

ctgatgggag gacctgtgta gatgttgatg aatgtgctac aggaagagcc 50

<210> 319

<211> 2110

<212> DNA

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 ttgcacagta cagtgtatga agttattcag cacatccctg cccagcagca 1400
 agaccatcca gagtgaactt tcatgggcta aacagtacat tcgagtgaaa 1450
 ttctgaagaa acattttaag gaaaaacagt ggaaaagtat attaactctgg 1500
 aatcagtga gaaaccagga ccaacacctc ttactcatta ttcctttaca 1550
 tgcagaatag aggcatttat gcaaattgaa ctgcagggtt ttcagcatat 1600
 acacaatgtc ttgtgcaaca gaaaaacatg ttgggggaaat attcctcagt 1650
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 tcataagttt tgtatgaaat atctctacaa acctcaatta gttctactct 1750
 acactttcac tatcatcaac actgagacta tctgtctca cctacaaatg 1800
 tggaaacttt acattgttcg atttttcagc agactttggt ttattaaatt 1850
 tttattagtg ttaagaatgc taaatttatg tttcaatttt atttccaaat 1900
 ttctatcttg ttatttgtac aacaaagtaa taaggatggt tgtcacaaaa 1950
 aaaaaactat gccttctctt ttttttcaat caccagtagt atttttgaga 2000
 agacttgatga acacttaagg aaatgactat taaagtctta tttttatttt 2050
 tttcaaggaa agatggattc aaataaatta ttctgttttt gcttttaaaa 2100
 aaaaaaaaaa 2110

<210> 320

<211> 450

<212> PRT

<213> Homo Sapien

<400> 320

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Trp | Leu | Lys | Val | Phe | Thr | Thr | Phe | Leu | Ser | Phe | Ala | Thr | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Cys | Ser | Gly | Leu | Lys | Val | Thr | Val | Pro | Ser | His | Thr | Val | His |
| | | | | 20 | | | | | 25 | | | | | 30 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Arg | Gly | Gln | Ala | Leu | Tyr | Leu | Pro | Val | His | Tyr | Gly | Phe |
| | | | | 35 | | | | | 40 | | | | | 45 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Thr | Pro | Ala | Ser | Asp | Ile | Gln | Ile | Ile | Trp | Leu | Phe | Glu | Arg |
| | | | | 50 | | | | | 55 | | | | | 60 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|
| Pro | His | Thr | Met | Pro
65 | Lys | Tyr | Leu | Leu | Gly
70 | Ser | Val | Asn | Lys | Ser
75 |
| Val | Val | Pro | Asp | Leu
80 | Glu | Tyr | Gln | His | Lys
85 | Phe | Thr | Met | Met | Pro
90 |
| Pro | Asn | Ala | Ser | Leu
95 | Leu | Ile | Asn | Pro | Leu
100 | Gln | Phe | Pro | Asp | Glu
105 |
| Gly | Asn | Tyr | Ile | Val
110 | Lys | Val | Asn | Ile | Gln
115 | Gly | Asn | Gly | Thr | Leu
120 |
| Ser | Ala | Ser | Gln | Lys
125 | Ile | Gln | Val | Thr | Val
130 | Asp | Asp | Pro | Val | Thr
135 |
| Lys | Pro | Val | Val | Gln
140 | Ile | His | Pro | Pro | Ser
145 | Gly | Ala | Val | Glu | Tyr
150 |
| Val | Gly | Asn | Met | Thr
155 | Leu | Thr | Cys | His | Val
160 | Glu | Gly | Gly | Thr | Arg
165 |
| Leu | Ala | Tyr | Gln | Trp
170 | Leu | Lys | Asn | Gly | Arg
175 | Pro | Val | His | Thr | Ser
180 |
| Ser | Thr | Tyr | Ser | Phe
185 | Ser | Pro | Gln | Asn | Asn
190 | Thr | Leu | His | Ile | Ala
195 |
| Pro | Val | Thr | Lys | Glu
200 | Asp | Ile | Gly | Asn | Tyr
205 | Ser | Cys | Leu | Val | Arg
210 |
| Asn | Pro | Val | Ser | Glu
215 | Met | Glu | Ser | Asp | Ile
220 | Ile | Met | Pro | Ile | Ile
225 |
| Tyr | Tyr | Gly | Pro | Tyr
230 | Gly | Leu | Gln | Val | Asn
235 | Ser | Asp | Lys | Gly | Leu
240 |
| Lys | Val | Gly | Glu | Val
245 | Phe | Thr | Val | Asp | Leu
250 | Gly | Glu | Ala | Ile | Leu
255 |
| Phe | Asp | Cys | Ser | Ala
260 | Asp | Ser | His | Pro | Pro
265 | Asn | Thr | Tyr | Ser | Trp
270 |
| Ile | Arg | Arg | Thr | Asp
275 | Asn | Thr | Thr | Tyr | Ile
280 | Ile | Lys | His | Gly | Pro
285 |
| Arg | Leu | Glu | Val | Ala
290 | Ser | Glu | Lys | Val | Ala
295 | Gln | Lys | Thr | Met | Asp
300 |
| Tyr | Val | Cys | Cys | Ala
305 | Tyr | Asn | Asn | Ile | Thr
310 | Gly | Arg | Gln | Asp | Glu
315 |
| Thr | His | Phe | Thr | Val | Ile | Ile | Thr | Ser | Val | Gly | Leu | Glu | Lys | Leu |

| 320 | 325 | 330 |
|---|-----|-----|
| Ala Gln Lys Gly Lys Ser Leu Ser Pro Leu Ala Ser Ile Thr Gly | | |
| 335 | 340 | 345 |
| Ile Ser Leu Phe Leu Ile Ile Ser Met Cys Leu Leu Phe Leu Trp | | |
| 350 | 355 | 360 |
| Lys Lys Tyr Gln Pro Tyr Lys Val Ile Lys Gln Lys Leu Glu Gly | | |
| 365 | 370 | 375 |
| Arg Pro Glu Thr Glu Tyr Arg Lys Ala Gln Thr Phe Ser Gly His | | |
| 380 | 385 | 390 |
| Glu Asp Ala Leu Asp Asp Phe Gly Ile Tyr Glu Phe Val Ala Phe | | |
| 395 | 400 | 405 |
| Pro Asp Val Ser Gly Val Ser Arg Ile Pro Ser Arg Ser Val Pro | | |
| 410 | 415 | 420 |
| Ala Ser Asp Cys Val Ser Gly Gln Asp Leu His Ser Thr Val Tyr | | |
| 425 | 430 | 435 |
| Glu Val Ile Gln His Ile Pro Ala Gln Gln Gln Asp His Pro Glu | | |
| 440 | 445 | 450 |

<210> 321

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 321

gacctgtca caaagccagt ggtgc 25

<210> 322

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 322

cactgacagg gttcctcacc cagg 24

<210> 323

<211> 45

<212> DNA

<213> Artificial Sequence

<223> Synthetic Oligonucleotide Probe

ctccctctgg gctgtggagt atgtggggaa catgaccctg acatg 45

<211> 2397

<213> Homo Sapien

| | | | | | |
|------------|------------|------------|-------------|------------|------|
| gcaagcggcg | aaatggcgcc | ctccgggagt | cttgagttc | ccctggcagt | 50 |
| cctggtgctg | ttgctttggg | gtgctccctg | gacgcacggg | cggcggagca | 100 |
| acgttcgcgt | catcacggac | gagaactgga | gagaactgct | ggaaggagac | 150 |
| tggatgatag | aattttatgc | cccgtgggtg | cctgcttgtc | aaaatcttca | 200 |
| accggaatgg | gaaagttttg | ctgaatgggg | agaagatctt | gaggttaata | 250 |
| ttgcgaaagt | agatgtcaca | gagcagccag | gactgagtgg | acggtttatc | 300 |
| ataactgctc | ttcctactat | ttatcattgt | aaagatgggtg | aatttaggcg | 350 |
| ctatcagggt | ccaaggacta | agaaggactt | cataaacttt | ataagtgata | 400 |
| aagagtggaa | gagtattgag | cccgtttcat | catggtttgg | tccaggttct | 450 |
| gttctgatga | gtagtatgtc | agcactcttt | cagctatcta | tgtggatcag | 500 |
| gacgtgccat | aactacttta | ttgaagacct | tggattgccca | gtgtggggat | 550 |
| catatactgt | ttttgcttta | gcaactctgt | tttccggact | gttattagga | 600 |
| ctctgtatga | tatttggtgc | agattgcctt | tgtccttcaa | aaaggcgcag | 650 |
| accacagcca | taccataacc | cttcaaaaaa | attattatca | gaatctgcac | 700 |
| aacctttgaa | aaaagtggag | gaggaacaag | aggcggatga | agaagatggt | 750 |
| tcagaagaag | aagctgaaag | taaagaagga | acaaacaaag | actttccaca | 800 |
| gaatgccata | agacaacgct | ctctgggtcc | atcattggcc | acagataaat | 850 |
| cctagttaaa | ttttatagtt | atcttaatat | tatgattttg | ataaaaacag | 900 |
| aagattgatc | attttgtttg | gtttgaagtg | aactgtgact | tttttgaata | 950 |
| ttgcaggggt | cagtctagat | tgtcattaaa | ttgaagagtc | tacattcaga | 1000 |

Arg Arg Arg Pro Gln Pro Tyr Pro Tyr Pro Ser Lys Lys Leu Leu

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 215 | | 220 | | 225 | | | | | | | | | |
| Ser | Glu | Ser | Ala | Gln | Pro | Leu | Lys | Lys | Val | Glu | Glu | Glu | Gln | Glu |
| | 230 | | | | | | | | 235 | | | | 240 | |
| Ala | Asp | Glu | Glu | Asp | Val | Ser | Glu | Glu | Glu | Ala | Glu | Ser | Lys | Glu |
| | 245 | | | | | | | | 250 | | | | 255 | |
| Gly | Thr | Asn | Lys | Asp | Phe | Pro | Gln | Asn | Ala | Ile | Arg | Gln | Arg | Ser |
| | 260 | | | | | | | | 265 | | | | 270 | |
| Leu | Gly | Pro | Ser | Leu | Ala | Thr | Asp | Lys | Ser | | | | | |
| | 275 | | | | | | | | 280 | | | | | |

<210> 326

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 326

tgaggtgggc aagcggcgaa atg 23

<210> 327

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 327

tatgtggatc aggacgtgcc 20

<210> 328

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 328

tgcagggttc agtctagatt g 21

<210> 329

<211> 25

<212> DNA

<213> Artificial Sequence

| | | | | | |
|-------------|------------|------------|------------|------------|-----|
| <400> | 331 | | | | |
| gcgagtggtcc | agctgcggag | acccgtgata | attcgttaac | taattcaaca | 50 |
| aacgggaccc | ttctgtgtgc | cagaaaccgc | aagcagttgc | taaccacagt | 100 |
| ggacaggcgg | attggaagag | cggaaggtc | ctggcccaga | gcagtgtgac | 150 |
| acttccctct | gtgaccatga | aactctgggt | gtctgcattg | ctgatggcct | 200 |
| ggtttggtgt | cctgagctgt | gtgcaggccg | aattcttcac | ctctattggg | 250 |
| cacatgactg | acctgattta | tgcagagaaa | gagctggtgc | agtctctgaa | 300 |
| agagtacatc | cttgtggagg | aagccaagct | ttccaagatt | aagagctggg | 350 |
| ccaacaaaat | ggaagccttg | actagcaagt | cagctgctga | tgctgagggc | 400 |
| tacctggctc | accctgtgaa | tgctacaaa | ctggtgaagc | ggctaaacac | 450 |
| agactggcct | gcgctggagg | accttgtcct | gcaggactca | gctgcaggtt | 500 |
| ttatcgccaa | cctctctgtg | cagcggcagt | tcttccccac | tgatgaggac | 550 |
| gagataggag | ctgccaaagc | cctgatgaga | cttcaggaca | catacaggct | 600 |
| ggaccacagg | acaatttcca | gaggggaact | tccaggaacc | aagtaccagg | 650 |
| caatgctgag | tgtggatgac | tgctttggga | tgggccgctc | ggcctacaat | 700 |
| gaaggggact | attatcatat | ggtgttgtgg | atggagcagg | tgctaaagca | 750 |

| | | | | | |
|------------|-------------|------------|------------|-------------|------|
| gcttgatgcc | ggggaggagg | ccaccacaac | caagtcacag | gtgctggact | 800 |
| acctcagcta | tgctgtcttc | cagttgggtg | atctgcaccg | tgccctggag | 850 |
| ctcacccgcc | gcctgctctc | ccttgaccca | agccacgaac | gagctggagg | 900 |
| gaatctgcgg | tactttgagc | agttattgga | ggaagagaga | gaaaaaacgt | 950 |
| taacaaatca | gacagaagct | gagctagcaa | cccagaagg | catctatgag | 1000 |
| aggcctgtgg | actacctgcc | tgagagggat | gtttacgaga | gcctctgtcg | 1050 |
| tggggagggg | gtcaaaactga | caccccgtag | acagaagagg | cttttctgta | 1100 |
| ggtaccacca | tggcaacagg | gccccacagc | tgctcattgc | ccccttcaaa | 1150 |
| gaggaggacg | agtgggacag | cccgcacatc | gtcaggtact | acgatgtcat | 1200 |
| gtctgatgag | gaaatcgaga | ggatcaagga | gatcgcaaaa | cctaaacttg | 1250 |
| cacgagccac | cgttcgtgat | ccaagacag | gagtcctcac | tgtcgccagc | 1300 |
| taccgggttt | ccaaaagctc | ctggctagag | gaagatgatg | accctgttgt | 1350 |
| ggcccagta | aatcgtcgga | tgcagcatat | cacagggtta | acagtaaaga | 1400 |
| ctgcagaatt | gttacagggt | gcaaattatg | gagtgggagg | acagtatgaa | 1450 |
| ccgcacttcg | acttctctag | gcgacctttt | gacagcggcc | tcaaaacaga | 1500 |
| ggggaatagg | ttagcgacgt | ttcttaacta | catgagtgat | gtagaagctg | 1550 |
| gtggtgccac | cgtcttcctt | gatctggggg | ctgcaatttg | gcctaagaag | 1600 |
| ggtacagctg | tgttctggta | caacctcttg | cggagcgggg | aagggtgacta | 1650 |
| ccgaacaaga | catgctgcct | gccctgtgct | tgtgggctgc | aagtgggtct | 1700 |
| ccaataagtg | gttccatgaa | cgaggacagg | agtctcttag | accttgtgga | 1750 |
| tcaacagaag | ttgactgaca | tccttttctg | tccttcccct | tcctggctct | 1800 |
| tcagcccatg | tcaacgtgac | agacaccttt | gtatgttcct | ttgtatgttc | 1850 |
| ctatcaggct | gattttttgga | gaaatgaatg | tttgtctgga | gcagagggag | 1900 |
| accatactag | ggcgactcct | gtgtgactga | agtcccagcc | cttccattca | 1950 |
| gcctgtgcca | tccttgcccc | caaggctagg | atcaaagtgg | ctgcagcaga | 2000 |
| gttagctgtc | tagcgcctag | caaggctcct | ttgtacctca | ggtgttttag | 2050 |
| gtgtgagatg | tttcagtga | ccaaagttct | gataccttgt | ttacatgttt | 2100 |

cctaccagaa aaaaaaaaaa 2168

<211> 533

<212> PRT

<213> Homo Sapien

<400> 332

Met Lys Leu Trp Val Ser Ala Leu Leu Met Ala Trp Phe Gly Val
1 5 10 15

Leu Ser Cys Val Gln Ala Glu Phe Phe Thr Ser Ile Gly His Met
20 25 30

Thr Asp Leu Ile Tyr Ala Glu Lys Glu Leu Val Gln Ser Leu Lys
35 40 45

Glu Tyr Ile Leu Val Glu Glu Ala Lys Leu Ser Lys Ile Lys Ser
50 55 60

Trp Ala Asn Lys Met Glu Ala Leu Thr Ser Lys Ser Ala Ala Asp
65 70 75

Ala Glu Gly Tyr Leu Ala His Pro Val Asn Ala Tyr Lys Leu Val
80 85 90

Lys Arg Leu Asn Thr Asp Trp Pro Ala Leu Glu Asp Leu Val Leu
95 100 105

Gln Asp Ser Ala Ala Gly Phe Ile Ala Asn Leu Ser Val Gln Arg
110 115 120

Gln Phe Phe Pro Thr Asp Glu Asp Glu Ile Gly Ala Ala Lys Ala
125 130 135

Leu Met Arg Leu Gln Asp Thr Tyr Arg Leu Asp Pro Gly Thr Ile
140 145 150

Ser Arg Gly Glu Leu Pro Gly Thr Lys Tyr Gln Ala Met Leu Ser
155 160 165

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Asp | Asp | Cys | Phe | Gly | Met | Gly | Arg | Ser | Ala | Tyr | Asn | Glu | Gly |
| | | | | 170 | | | | | 175 | | | | | 180 |

Asp Tyr Tyr His Thr Val Leu Trp Met Glu Gln Val Leu Lys Gln
185 190 195

Leu Asp Ala Gly Glu Glu Ala Thr Thr Thr Lys Ser Gln Val Leu
200 205 210

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Tyr | Leu | Ser | Tyr | Ala | Val | Phe | Gln | Leu | Gly | Asp | Leu | His | Arg |
| | | | | 215 | | | | | 220 | | | | | 225 |
| Ala | Leu | Glu | Leu | Thr | Arg | Arg | Leu | Leu | Ser | Leu | Asp | Pro | Ser | His |
| | | | | 230 | | | | | 235 | | | | | 240 |
| Glu | Arg | Ala | Gly | Gly | Asn | Leu | Arg | Tyr | Phe | Glu | Gln | Leu | Leu | Glu |
| | | | | 245 | | | | | 250 | | | | | 255 |
| Glu | Glu | Arg | Glu | Lys | Thr | Leu | Thr | Asn | Gln | Thr | Glu | Ala | Glu | Leu |
| | | | | 260 | | | | | 265 | | | | | 270 |
| Ala | Thr | Pro | Glu | Gly | Ile | Tyr | Glu | Arg | Pro | Val | Asp | Tyr | Leu | Pro |
| | | | | 275 | | | | | 280 | | | | | 285 |
| Glu | Arg | Asp | Val | Tyr | Glu | Ser | Leu | Cys | Arg | Gly | Glu | Gly | Val | Lys |
| | | | | 290 | | | | | 295 | | | | | 300 |
| Leu | Thr | Pro | Arg | Arg | Gln | Lys | Arg | Leu | Phe | Cys | Arg | Tyr | His | His |
| | | | | 305 | | | | | 310 | | | | | 315 |
| Gly | Asn | Arg | Ala | Pro | Gln | Leu | Leu | Ile | Ala | Pro | Phe | Lys | Glu | Glu |
| | | | | 320 | | | | | 325 | | | | | 330 |
| Asp | Glu | Trp | Asp | Ser | Pro | His | Ile | Val | Arg | Tyr | Tyr | Asp | Val | Met |
| | | | | 335 | | | | | 340 | | | | | 345 |
| Ser | Asp | Glu | Glu | Ile | Glu | Arg | Ile | Lys | Glu | Ile | Ala | Lys | Pro | Lys |
| | | | | 350 | | | | | 355 | | | | | 360 |
| Leu | Ala | Arg | Ala | Thr | Val | Arg | Asp | Pro | Lys | Thr | Gly | Val | Leu | Thr |
| | | | | 365 | | | | | 370 | | | | | 375 |
| Val | Ala | Ser | Tyr | Arg | Val | Ser | Lys | Ser | Ser | Trp | Leu | Glu | Glu | Asp |
| | | | | 380 | | | | | 385 | | | | | 390 |
| Asp | Asp | Pro | Val | Val | Ala | Arg | Val | Asn | Arg | Arg | Met | Gln | His | Ile |
| | | | | 395 | | | | | 400 | | | | | 405 |
| Thr | Gly | Leu | Thr | Val | Lys | Thr | Ala | Glu | Leu | Leu | Gln | Val | Ala | Asn |
| | | | | 410 | | | | | 415 | | | | | 420 |
| Tyr | Gly | Val | Gly | Gly | Gln | Tyr | Glu | Pro | His | Phe | Asp | Phe | Ser | Arg |
| | | | | 425 | | | | | 430 | | | | | 435 |
| Arg | Pro | Phe | Asp | Ser | Gly | Leu | Lys | Thr | Glu | Gly | Asn | Arg | Leu | Ala |
| | | | | 440 | | | | | 445 | | | | | 450 |
| Thr | Phe | Leu | Asn | Tyr | Met | Ser | Asp | Val | Glu | Ala | Gly | Gly | Ala | Thr |
| | | | | 455 | | | | | 460 | | | | | 465 |
| Val | Phe | Pro | Asp | Leu | Gly | Ala | Ala | Ile | Trp | Pro | Lys | Lys | Gly | Thr |
| | | | | 470 | | | | | 475 | | | | | 480 |

Ala Val Phe Trp Tyr Asn Leu Leu Arg Ser Gly Glu Gly Asp Tyr
 485 490 495

Arg Thr Arg His Ala Ala Cys Pro Val Leu Val Gly Cys Lys Trp
 500 505 510

Val Ser Asn Lys Trp Phe His Glu Arg Gly Gln Glu Phe Leu Arg
 515 520 525

Pro Cys Gly Ser Thr Glu Val Asp
 530

<210> 333

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 333

ccaggcaciaa tttccaga 18

<210> 334

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 334

ggacccttct gtgtgccag 19

<210> 335

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 335

ggtctcaaga actcctgtc 19

<210> 336

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 336
acactcagca ttgcttgga cttg 24

<210> 337
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 337
gggcacatga ctgacctgat ttatgcagag aaagagctgg tgcag 45

<210> 338
<211> 2789

<212> DNA
<213> Homo Sapien

<400> 338
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tcccagtgtg agtgaaattg attgtttcat ttattaccgt tttggctggg 100
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agacaggaca atcttcttgg ggatgctggg cctggaagcc agcgggcctt 200
gctctgtctt tggcctcatt gaccccaggt tctctgggta aaactgaaag 250
cctactactg gcctgggtgcc catcaatcca ttgatccttg aggctgtgcc 300
cctggggcac ccacctggca gggcctacca ccatgcgact gagctccctg 350
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atccctgtgt cgaggctgta ggggagcgag gagggccaca gaatccagat 500
tcgagagctc ggctagacca aagtgatgaa gacttcaaac cccggattgt 550
cccctactac agggacccca acaagcccta caagaagggtg ctcaggactc 600
ggtagatcca gacagagctg ggctcccggtg agcgggttgc ggtggctgtc 650
ctgaacctcc gagctacact gtccactttg gccgtggctg tgaaccgtac 700
ggtagggcat cacttccctc gggttactcta cttcactggg cagcgggggg 750
cccgggctcc agcagggatg caggtgggtgt ctcatgggga tgagcggccc 800

| | | | | | |
|------------|-------------|------------|------------|------------|------|
| gcctggctca | tgtcagagac | cctgcgccac | cttcacacac | actttggggc | 850 |
| cgactacgac | tggttcttca | tcatgcagga | tgacacatat | gtgcaggccc | 900 |
| cccgcctggc | agcccttgct | ggccacctca | gcatcaacca | agacctgtac | 950 |
| ttaggccggg | cagaggagt | cattggcgca | ggcgagcagg | cccgtactg | 1000 |
| tcatgggggc | tttggctacc | tgttgtcacg | gagtctcttg | cttcgtctgc | 1050 |
| ggccacatct | ggatggctgc | cgaggagaca | ttctcagtgc | ccgtcctgac | 1100 |
| gagtggcttg | gacgctgcct | cattgactct | ctgggcgtcg | gctgtgtctc | 1150 |
| acagcaccag | gggcagcagt | atcgctcatt | tgaactggcc | aaaaataggg | 1200 |
| accctgagaa | ggaagggagc | tcggctttcc | tgagtgcctt | cgccgtgcac | 1250 |
| cctgtctccg | aaggtaccct | catgtaccgg | ctccacaaac | gcttcagcgc | 1300 |
| tctggagttg | gagcgggctt | acagtgaaat | agaacaactg | caggctcaga | 1350 |
| tccggaacct | gaccgtgctg | acccccgaag | gggaggcagg | gctgagctgg | 1400 |
| cccgttgggc | tccctgctcc | tttcacacca | cactctcgct | ttgagggtgt | 1450 |
| gggctgggac | tacttcacag | agcagcacac | cttctctctg | gcagatgggg | 1500 |
| ctcccaagtg | cccactacag | ggggctagca | gggcggacgt | gggtgatgcg | 1550 |
| ttggagactg | ccctggagca | gctcaatcgg | cgctatcagc | cccgcctgcg | 1600 |
| cttccagaag | cagcgactgc | tcaacggcta | tcggcgcttc | gaccagcac | 1650 |
| ggggcatgga | gtacaccctg | gacctgctgt | tggaatgtgt | gacacagcgt | 1700 |
| gggcaccggc | gggccttggc | tcgcagggtc | agcctgctgc | ggccactgag | 1750 |
| ccgggtggaa | atcctacct | tgcctatgt | cactgaggcc | acccgagtgc | 1800 |
| agctggtgct | gccactcctg | gtggctgaag | ctgctgcagc | cccggctttc | 1850 |
| ctcgaggcgt | ttgcagccaa | tgtcctggag | ccacgagaac | atgcattgct | 1900 |
| caccctgttg | ctggtctacg | ggccacgaga | aggtggccgt | ggagctccag | 1950 |
| accattttct | tgggggtgaag | gctgcagcag | cggagttaga | gcgacggtac | 2000 |
| cctgggacga | ggctggcctg | gctcgctgtg | cgagcagagg | ccccttccca | 2050 |
| ggtgcgactc | atggacgtgg | tctcgaagaa | gcacctgtg | gacactctct | 2100 |

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<211> 772

<212> PRT

<213> Homo Sapien

<400> 339

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| Met | Arg | Leu | Ser | Ser | Leu | Leu | Ala | Leu | Leu | Arg | Pro | Ala | Leu | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ile | Leu | Gly | Leu | Ser | Leu | Gly | Cys | Ser | Leu | Ser | Leu | Leu | Arg |
| | | | 20 | | | | | 25 | | | | | | 30 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Trp | Ile | Gln | Gly | Glu | Gly | Glu | Asp | Pro | Cys | Val | Glu | Ala |
| | | | 35 | | | | | 40 | | | | | | 45 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Glu | Arg | Gly | Gly | Pro | Gln | Asn | Pro | Asp | Ser | Arg | Ala | Arg |
| | | | 50 | | | | | 55 | | | | | | 60 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Gln | Ser | Asp | Glu | Asp | Phe | Lys | Pro | Arg | Ile | Val | Pro | Tyr |
| | | | 65 | | | | | 70 | | | | | | 75 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Arg | Asp | Pro | Asn | Lys | Pro | Tyr | Lys | Lys | Val | Leu | Arg | Thr | Arg |
| | | | 80 | | | | | 85 | | | | | | 90 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ile | Gln | Thr | Glu | Leu | Gly | Ser | Arg | Glu | Arg | Leu | Leu | Val | Ala |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

| | | | | | |
|-----------------|-------------------------|-------------------------|-----|--|-----|
| | 95 | | 100 | | 105 |
| Val Leu Thr Ser | Arg Ala Thr Leu Ser | Thr Leu Ala Val Ala Val | | | |
| | 110 | 115 | | | 120 |
| Asn Arg Thr Val | Ala His His Phe Pro Arg | Leu Leu Tyr Phe Thr | | | |
| | 125 | 130 | | | 135 |
| Gly Gln Arg Gly | Ala Arg Ala Pro Ala Gly | Met Gln Val Val Ser | | | |
| | 140 | 145 | | | 150 |
| His Gly Asp Glu | Arg Pro Ala Trp Leu Met | Ser Glu Thr Leu Arg | | | |
| | 155 | 160 | | | 165 |
| His Leu His Thr | His Phe Gly Ala Asp Tyr | Asp Trp Phe Phe Ile | | | |
| | 170 | 175 | | | 180 |
| Met Gln Asp Asp | Thr Tyr Val Gln Ala Pro | Arg Leu Ala Ala Leu | | | |
| | 185 | 190 | | | 195 |
| Ala Gly His Leu | Ser Ile Asn Gln Asp Leu | Tyr Leu Gly Arg Ala | | | |
| | 200 | 205 | | | 210 |
| Glu Glu Phe Ile | Gly Ala Gly Glu Gln Ala | Arg Tyr Cys His Gly | | | |
| | 215 | 220 | | | 225 |
| Gly Phe Gly Tyr | Leu Leu Ser Arg Ser Leu | Leu Leu Arg Leu Arg | | | |
| | 230 | 235 | | | 240 |
| Pro His Leu Asp | Gly Cys Arg Gly Asp Ile | Leu Ser Ala Arg Pro | | | |
| | 245 | 250 | | | 255 |
| Asp Glu Trp Leu | Gly Arg Cys Leu Ile Asp | Ser Leu Gly Val Gly | | | |
| | 260 | 265 | | | 270 |
| Cys Val Ser Gln | His Gln Gly Gln Gln Tyr | Arg Ser Phe Glu Leu | | | |
| | 275 | 280 | | | 285 |
| Ala Lys Asn Arg | Asp Pro Glu Lys Glu Gly | Ser Ser Ala Phe Leu | | | |
| | 290 | 295 | | | 300 |
| Ser Ala Phe Ala | Val His Pro Val Ser Glu | Gly Thr Leu Met Tyr | | | |
| | 305 | 310 | | | 315 |
| Arg Leu His Lys | Arg Phe Ser Ala Leu Glu | Leu Glu Arg Ala Tyr | | | |
| | 320 | 325 | | | 330 |
| Ser Glu Ile Glu | Gln Leu Gln Ala Gln Ile | Arg Asn Leu Thr Val | | | |
| | 335 | 340 | | | 345 |
| Leu Thr Pro Glu | Gly Glu Ala Gly Leu Ser | Trp Pro Val Gly Leu | | | |
| | 350 | 355 | | | 360 |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Pro | Phe | Thr | Pro | His | Ser | Arg | Phe | Glu | Val | Leu | Gly | Trp | 365 | 370 | 375 |
| Asp | Tyr | Phe | Thr | Glu | Gln | His | Thr | Phe | Ser | Cys | Ala | Asp | Gly | Ala | 380 | 385 | 390 |
| Pro | Lys | Cys | Pro | Leu | Gln | Gly | Ala | Ser | Arg | Ala | Asp | Val | Gly | Asp | 395 | 400 | 405 |
| Ala | Leu | Glu | Thr | Ala | Leu | Glu | Gln | Leu | Asn | Arg | Arg | Tyr | Gln | Pro | 410 | 415 | 420 |
| Arg | Leu | Arg | Phe | Gln | Lys | Gln | Arg | Leu | Leu | Asn | Gly | Tyr | Arg | Arg | 425 | 430 | 435 |
| Phe | Asp | Pro | Ala | Arg | Gly | Met | Glu | Tyr | Thr | Leu | Asp | Leu | Leu | Leu | 440 | 445 | 450 |
| Glu | Cys | Val | Thr | Gln | Arg | Gly | His | Arg | Arg | Ala | Leu | Ala | Arg | Arg | 455 | 460 | 465 |
| Val | Ser | Leu | Leu | Arg | Pro | Leu | Ser | Arg | Val | Glu | Ile | Leu | Pro | Met | 470 | 475 | 480 |
| Pro | Tyr | Val | Thr | Glu | Ala | Thr | Arg | Val | Gln | Leu | Val | Leu | Pro | Leu | 485 | 490 | 495 |
| Leu | Val | Ala | Glu | Ala | Ala | Ala | Ala | Pro | Ala | Phe | Leu | Glu | Ala | Phe | 500 | 505 | 510 |
| Ala | Ala | Asn | Val | Leu | Glu | Pro | Arg | Glu | His | Ala | Leu | Leu | Thr | Leu | 515 | 520 | 525 |
| Leu | Leu | Val | Tyr | Gly | Pro | Arg | Glu | Gly | Gly | Arg | Gly | Ala | Pro | Asp | 530 | 535 | 540 |
| Pro | Phe | Leu | Gly | Val | Lys | Ala | Ala | Ala | Ala | Glu | Leu | Glu | Arg | Arg | 545 | 550 | 555 |
| Tyr | Pro | Gly | Thr | Arg | Leu | Ala | Trp | Leu | Ala | Val | Arg | Ala | Glu | Ala | 560 | 565 | 570 |
| Pro | Ser | Gln | Val | Arg | Leu | Met | Asp | Val | Val | Ser | Lys | Lys | His | Pro | 575 | 580 | 585 |
| Val | Asp | Thr | Leu | Phe | Phe | Leu | Thr | Thr | Val | Trp | Thr | Arg | Pro | Gly | 590 | 595 | 600 |
| Pro | Glu | Val | Leu | Asn | Arg | Cys | Arg | Met | Asn | Ala | Ile | Ser | Gly | Trp | 605 | 610 | 615 |
| Gln | Ala | Phe | Phe | Pro | Val | His | Phe | Gln | Glu | Phe | Asn | Pro | Ala | Leu | 620 | 625 | 630 |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Gln | Arg | Ser | Pro | Pro | Gly | Pro | Pro | Gly | Ala | Gly | Pro | Asp |
| | | | | 635 | | | | | 640 | | | | | 645 |
| Pro | Pro | Ser | Pro | Pro | Gly | Ala | Asp | Pro | Ser | Arg | Gly | Ala | Pro | Ile |
| | | | | 650 | | | | | 655 | | | | | 660 |
| Gly | Gly | Arg | Phe | Asp | Arg | Gln | Ala | Ser | Ala | Glu | Gly | Cys | Phe | Tyr |
| | | | | 665 | | | | | 670 | | | | | 675 |
| Asn | Ala | Asp | Tyr | Leu | Ala | Ala | Arg | Ala | Arg | Leu | Ala | Gly | Glu | Leu |
| | | | | 680 | | | | | 685 | | | | | 690 |
| Ala | Gly | Gln | Glu | Glu | Glu | Glu | Ala | Leu | Glu | Gly | Leu | Glu | Val | Met |
| | | | | 695 | | | | | 700 | | | | | 705 |
| Asp | Val | Phe | Leu | Arg | Phe | Ser | Gly | Leu | His | Leu | Phe | Arg | Ala | Val |
| | | | | 710 | | | | | 715 | | | | | 720 |
| Glu | Pro | Gly | Leu | Val | Gln | Lys | Phe | Ser | Leu | Arg | Asp | Cys | Ser | Pro |
| | | | | 725 | | | | | 730 | | | | | 735 |
| Arg | Leu | Ser | Glu | Glu | Leu | Tyr | His | Arg | Cys | Arg | Leu | Ser | Asn | Leu |
| | | | | 740 | | | | | 745 | | | | | 750 |
| Glu | Gly | Leu | Gly | Gly | Arg | Ala | Gln | Leu | Ala | Met | Ala | Leu | Phe | Glu |
| | | | | 755 | | | | | 760 | | | | | 765 |
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<212> PRT

<213> Homo Sapien

<400> 341

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| 1 | | | | 5 | | | | | 10 | | | | | 15 |
| Ser | Ile | Phe | Cys | Ala | Leu | Ile | Thr | Met | Leu | Gly | His | Ile | Arg | Ile |
| | | | | 20 | | | | | 25 | | | | | 30 |
| Gly | His | Gly | Asn | Arg | Met | His | His | His | Glu | His | His | His | Leu | Gln |
| | | | | 35 | | | | | 40 | | | | | 45 |
| Ala | Pro | Asn | Lys | Glu | Asp | Ile | Leu | Lys | Ile | Ser | Glu | Asp | Glu | Arg |
| | | | | 50 | | | | | 55 | | | | | 60 |
| Met | Glu | Leu | Ser | Lys | Ser | Phe | Arg | Val | Tyr | Cys | Ile | Ile | Leu | Val |
| | | | | 65 | | | | | 70 | | | | | 75 |
| Lys | Pro | Lys | Asp | Val | Ser | Leu | Trp | Ala | Ala | Val | Lys | Glu | Thr | Trp |
| | | | | 80 | | | | | 85 | | | | | 90 |
| Thr | Lys | His | Cys | Asp | Lys | Ala | Glu | Phe | Phe | Ser | Ser | Glu | Asn | Val |
| | | | | 95 | | | | | 100 | | | | | 105 |
| Lys | Val | Phe | Glu | Ser | Ile | Asn | Met | Asp | Thr | Asn | Asp | Met | Trp | Leu |
| | | | | 110 | | | | | 115 | | | | | 120 |
| Met | Met | Arg | Lys | Ala | Tyr | Lys | Tyr | Ala | Phe | Asp | Lys | Tyr | Arg | Asp |
| | | | | 125 | | | | | 130 | | | | | 135 |
| Gln | Tyr | Asn | Trp | Phe | Phe | Leu | Ala | Arg | Pro | Thr | Thr | Phe | Ala | Ile |
| | | | | 140 | | | | | 145 | | | | | 150 |
| Ile | Glu | Asn | Leu | Lys | Tyr | Phe | Leu | Leu | Lys | Lys | Asp | Pro | Ser | Gln |
| | | | | 155 | | | | | 160 | | | | | 165 |
| Pro | Phe | Tyr | Leu | Gly | His | Thr | Ile | Lys | Ser | Gly | Asp | Leu | Glu | Tyr |
| | | | | 170 | | | | | 175 | | | | | 180 |
| Val | Gly | Met | Glu | Gly | Gly | Ile | Val | Leu | Ser | Val | Glu | Ser | Met | Lys |
| | | | | 185 | | | | | 190 | | | | | 195 |
| Arg | Leu | Asn | Ser | Leu | Leu | Asn | Ile | Pro | Glu | Lys | Cys | Pro | Glu | Gln |
| | | | | 200 | | | | | 205 | | | | | 210 |
| Gly | Gly | Met | Ile | Trp | Lys | Ile | Ser | Glu | Asp | Lys | Gln | Leu | Ala | Val |
| | | | | 215 | | | | | 220 | | | | | 225 |
| Cys | Leu | Lys | Tyr | Ala | Gly | Val | Phe | Ala | Glu | Asn | Ala | Glu | Asp | Ala |
| | | | | 230 | | | | | 235 | | | | | 240 |
| Asp | Gly | Lys | Asp | Val | Phe | Asn | Thr | Lys | Ser | Val | Gly | Leu | Ser | Ile |
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| Lys | Glu | Ala | Met | Thr | Tyr | His | Pro | Asn | Gln | Val | Val | Glu | Gly | Cys |

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| Cys Ser Asp Met | Ala Val Thr Phe Asn Gly Leu Thr Pro Asn Gln | | | | |
| | 275 | | 280 | | 285 |
| Met His Val Met | Met Tyr Gly Val Tyr Arg Leu Arg Ala Phe Gly | | | | |
| | 290 | | 295 | | 300 |
| His Ile Phe Asn Asp Ala Leu Val Phe Leu Pro Pro Asn Gly Ser | | | | | |
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<213> Artificial Sequence

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<210> 349

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qtggttatca actcacagga ggagcaggaa ttcctttcct acaagaaacc 500

taaaatqaga qagtttttta ttggactgtc agaccagggtt gtcgaggggtc 550

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<212> PRT

<213> Homo Sapien

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| Cys | Phe | Ser | Ser | Gln | Met | Phe | Leu | Trp | Thr | Val | Ala | Gly | Ile | Pro |
| | | | | 20 | | | | | 25 | | | | | 30 |
| Ile | Leu | Phe | Leu | Ser | Ala | Cys | Phe | Ile | Thr | Arg | Cys | Val | Val | Thr |
| | | | | 35 | | | | | 40 | | | | | 45 |
| Phe | Arg | Ile | Phe | Gln | Thr | Cys | Asp | Glu | Lys | Lys | Phe | Gln | Leu | Pro |
| | | | | 50 | | | | | 55 | | | | | 60 |
| Glu | Asn | Phe | Thr | Glu | Leu | Ser | Cys | Tyr | Asn | Tyr | Gly | Ser | Gly | Ser |
| | | | | 65 | | | | | 70 | | | | | 75 |
| Val | Lys | Asn | Cys | Cys | Pro | Leu | Asn | Trp | Glu | Tyr | Phe | Gln | Ser | Ser |
| | | | | 80 | | | | | 85 | | | | | 90 |
| Cys | Tyr | Phe | Phe | Ser | Thr | Asp | Thr | Ile | Ser | Trp | Ala | Leu | Ser | Leu |
| | | | | 95 | | | | | 100 | | | | | 105 |
| Lys | Asn | Cys | Ser | Ala | Met | Gly | Ala | His | Leu | Val | Val | Ile | Asn | Ser |
| | | | | 110 | | | | | 115 | | | | | 120 |
| Gln | Glu | Glu | Gln | Glu | Phe | Leu | Ser | Tyr | Lys | Lys | Pro | Lys | Met | Arg |
| | | | | 125 | | | | | 130 | | | | | 135 |
| Glu | Phe | Phe | Ile | Gly | Leu | Ser | Asp | Gln | Val | Val | Glu | Gly | Gln | Trp |
| | | | | 140 | | | | | 145 | | | | | 150 |
| Gln | Trp | Val | Asp | Gly | Thr | Pro | Leu | Thr | Lys | Ser | Leu | Ser | Phe | Trp |
| | | | | 155 | | | | | 160 | | | | | 165 |
| Asp | Val | Gly | Glu | Pro | Asn | Asn | Ile | Ala | Thr | Leu | Glu | Asp | Cys | Ala |
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Thr Cys Phe Leu Asn Tyr Phe Arg Ile Cys Glu Met Val Gly Ile
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Asn Pro Leu Asn Lys Gly Lys Ser Leu
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<210> 394

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<223> Synthetic oligonucleotide probe

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<212> DNA

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| Met | Ala | Leu | Arg | Arg | Pro | Pro | Arg | Leu | Arg | Leu | Cys | Ala | Arg | Leu | 1 | 5 | 10 | 15 |
| Pro | Asp | Phe | Phe | Leu | Leu | Leu | Leu | Phe | Arg | Gly | Cys | Leu | Ile | Gly | 20 | 25 | 30 | |
| Ala | Val | Asn | Leu | Lys | Ser | Ser | Asn | Arg | Thr | Pro | Val | Val | Gln | Glu | 35 | 40 | 45 | |
| Phe | Glu | Ser | Val | Glu | Leu | Ser | Cys | Ile | Ile | Thr | Asp | Ser | Gln | Thr | 50 | 55 | 60 | |
| Ser | Asp | Pro | Arg | Ile | Glu | Trp | Lys | Lys | Ile | Gln | Asp | Glu | Gln | Thr | 65 | 70 | 75 | |
| Thr | Tyr | Val | Phe | Phe | Asp | Asn | Lys | Ile | Gln | Gly | Asp | Leu | Ala | Gly | 80 | 85 | 90 | |
| Arg | Ala | Glu | Ile | Leu | Gly | Lys | Thr | Ser | Leu | Lys | Ile | Trp | Asn | Val | 95 | 100 | 105 | |
| Thr | Arg | Arg | Asp | Ser | Ala | Leu | Tyr | Arg | Cys | Glu | Val | Val | Ala | Arg | 110 | 115 | 120 | |
| Asn | Asp | Arg | Lys | Glu | Ile | Asp | Glu | Ile | Val | Ile | Glu | Leu | Thr | Val | 125 | 130 | 135 | |
| Gln | Val | Lys | Pro | Val | Thr | Pro | Val | Cys | Arg | Val | Pro | Lys | Ala | Val | 140 | 145 | 150 | |
| Pro | Val | Gly | Lys | Met | Ala | Thr | Leu | His | Cys | Gln | Glu | Ser | Glu | Gly | 155 | 160 | 165 | |
| His | Pro | Arg | Pro | His | Tyr | Ser | Trp | Tyr | Arg | Asn | Asp | Val | Pro | Leu | 170 | 175 | 180 | |
| Pro | Thr | Asp | Ser | Arg | Ala | Asn | Pro | Arg | Phe | Arg | Asn | Ser | Ser | Phe | 185 | 190 | 195 | |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Leu | Asn | Ser | Glu | Thr | Gly | Thr | Leu | Val | Phe | Thr | Ala | Val | His |
| | | | | 200 | | | | | 205 | | | | | 210 |
| Lys | Asp | Asp | Ser | Gly | Gln | Tyr | Tyr | Cys | Ile | Ala | Ser | Asn | Asp | Ala |
| | | | | 215 | | | | | 220 | | | | | 225 |
| Gly | Ser | Ala | Arg | Cys | Glu | Glu | Gln | Glu | Met | Glu | Val | Tyr | Asp | Leu |
| | | | | 230 | | | | | 235 | | | | | 240 |
| Asn | Ile | Gly | Gly | Ile | Ile | Gly | Gly | Val | Leu | Val | Val | Leu | Ala | Val |
| | | | | 245 | | | | | 250 | | | | | 255 |
| Leu | Ala | Leu | Ile | Thr | Leu | Gly | Ile | Cys | Cys | Ala | Tyr | Arg | Arg | Gly |
| | | | | 260 | | | | | 265 | | | | | 270 |
| Tyr | Phe | Ile | Asn | Asn | Lys | Gln | Asp | Gly | Glu | Ser | Tyr | Lys | Asn | Pro |
| | | | | 275 | | | | | 280 | | | | | 285 |
| Gly | Lys | Pro | Asp | Gly | Val | Asn | Tyr | Ile | Arg | Thr | Asp | Glu | Glu | Gly |
| | | | | 290 | | | | | 295 | | | | | 300 |
| Asp | Phe | Arg | His | Lys | Ser | Ser | Phe | Val | Ile | | | | | |
| | | | | 305 | | | | | 310 | | | | | |